Datacard®

Datacard® SR200/SR300 Printer

Service Manual

April 2010

Part No. 539898-001, Rev A

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Revision Log

SR200/SR300 Service Manual

Revision	Date	Description of Changes
A	April 2010	First release of this document.

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SPECIFICATION

SR200, SR300	
Specifications	
Recording system	Dye sublimation retransfer
Paper feed mode	Automatic
Recording density	300 dpi
Reproduction gradation	256 levels each for Y, M and C; C and 2 for Bk
Interface	USB 2.0 (Hi-Speed/Full-Speed)
	Ethernet (100BASE-TX/10BASE-T)
Operating environment conditions	Temperature: 15°C to 30°C Temperature: 17°C to 28°C (When peel off, UV ink is used)
Operating environment conditions	Humidity: 35% to 70 % Humidity: 35 % to 60 % (When peel off, UV ink is used)
Storage environment conditions	Temperature: -15°C to 55°C
Storage environment conditions	Humidity: 20 % to 80 %
Power supply	AC 100V - 120V, AC 220V - 240V (allowance ±10%) 50/60Hz (allowance ±5%)
Current consumption	3.5 A (100 V system), 1.6A (200V system)
Power consumption	310 W (max.)
Mass	Standard approx. 12.5 kg (excluding optional built-in items)
Dimensions	343 mm x 335 mm x 322 mm (W x H x D)
Accessories	
Quick Reference× 1, Read Me First× 1, Power Cord (2 m)× 2, Cleaning Card× 1, Card Stacker× 1, USB 2.0 Cable:QAM1196(2 m)× 1, Gloves× 1, Tweezers× 1	
Products sold separately: Ink Ribbon/Retransfer Film	
To purchase these items, consult our authorized dealers.	
Ink Ribbon (YMCK), 1,000 frames/roll Model	CY-340-100R
Ink Ribbon (YMCKK), 750 frames/roll Model	CY-35K-75R
Ink Ribbon (YMCKP), 750 frames/roll Model	CY-35P-75R
Ink Ribbon (YMCKU), 750 frames/roll Model	CY-35U-75R
Retransfer Film (YMCKK), 1,000 frames/roll Model	CY-3RA-100R(B)
Cleaning Kit	Magnetic Head Cleaning Card (5 pcs), Cotton Swab (5 Large and 5 small), Cleaning Wipes (1 Box, Model: CX210-CKIT1)
Cleaning Card	10 pcs/Set (Model: CX210-CC1)

SECTION 1
PRECAUTION

1.1 SAFETY PRECAUTIONS

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold.However,in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

1.1.1 Precautions during Servicing

(1) Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product.When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

(2) Parts identified by the ⚠symbol and shaded ( ) parts are critical for safety.
Replace only with specified part numbers.

NOTE :

Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

(3) Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

(4) Use specified internal wiring. Note especially:
- Wires covered with PVC tubing
- Double insulated wires
- High voltage leads

(5) Use specified insulating materials for hazardous live parts. Note especially:
- Insulation Tape
- PVC tubing
- Spacers
- Insulation sheets for transistors
- Barrier

(6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

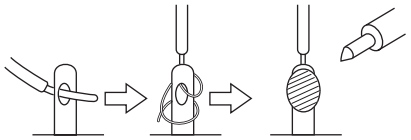


Fig.1-1-1

(7) Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

(8) Check that replaced wires do not contact sharp edged or pointed parts.

(9) When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

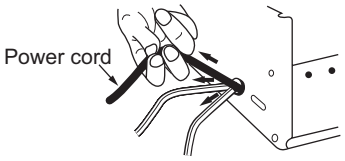


Fig.1-1-2

(10) Also check areas surrounding repaired locations.

(11) Products using cathode ray tubes (CRTs) In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits.Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

(12) Crimp type wire connector In such cases as when replacing the power transformer in sets where the connections between the power cord and power trans former primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

- **Connector part number** :E03830-001
- **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- **Replacement procedure**

a) Remove the old connector by cutting the wires at a point close to the connector.Important : Do not reuse a connector (discard it).

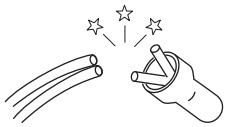


Fig.1-1-3

b) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

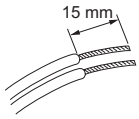


Fig.1-1-4

c) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

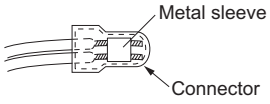


Fig.1-1-5

d) As shown in Fig.1-1-6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

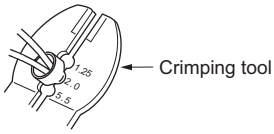


Fig.1-1-6

e) Check the four points noted in Fig.1-1-7.

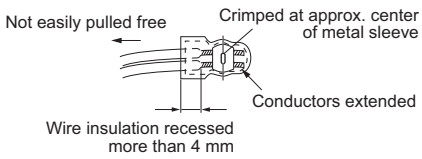


Fig.1-1-7

(13) **Battery replacement caution notice.**
CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECTIVE TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

1.1.2 Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

(1) Insulation resistance test
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).See table 1 below.

(2) Dielectric strength test
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See Fig.1-1-11 below.

(3) Clearance distance
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See Fig.1-1-11 below.

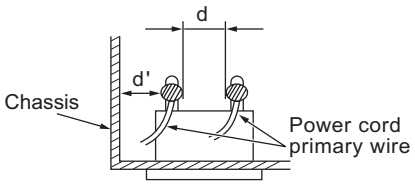


Fig.1-1-8

(4) Leakage current test
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON) Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig.1-1-9 and following Fig.1-1-12.

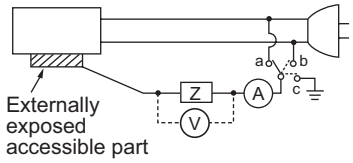
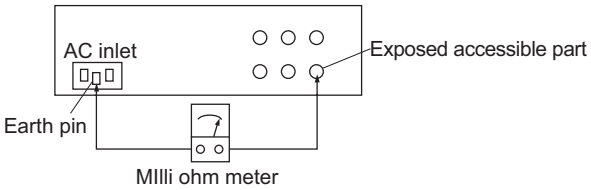


Fig.1-1-9

(5) Grounding (Class 1 model only)
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See Fig.1-1-10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

Fig.1-1-10

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦R≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Fig.1-1-11

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

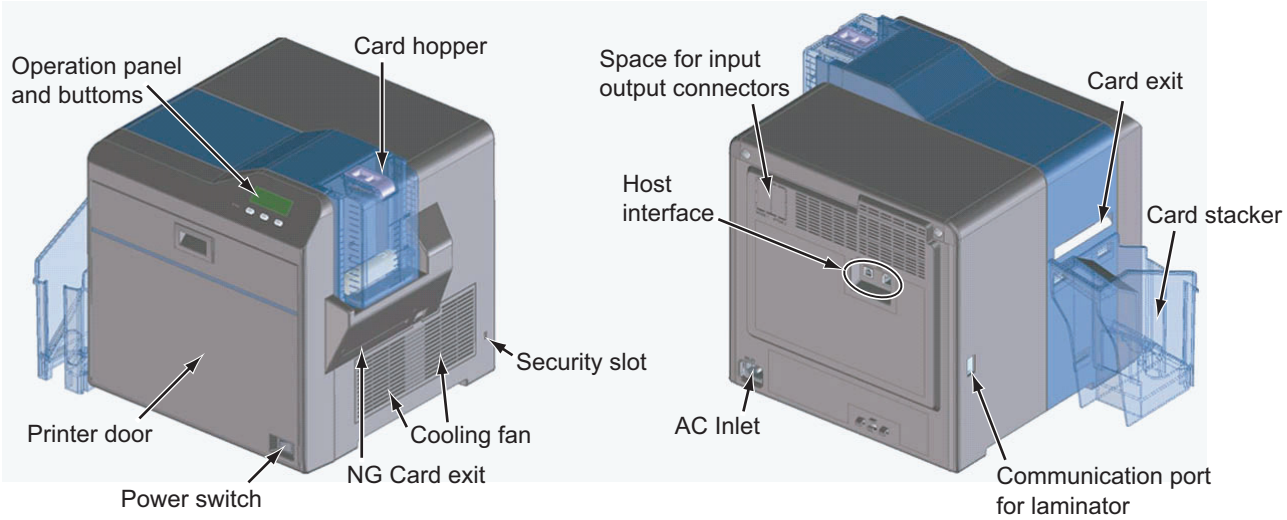
Fig.1-1-12

NOTE :
These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

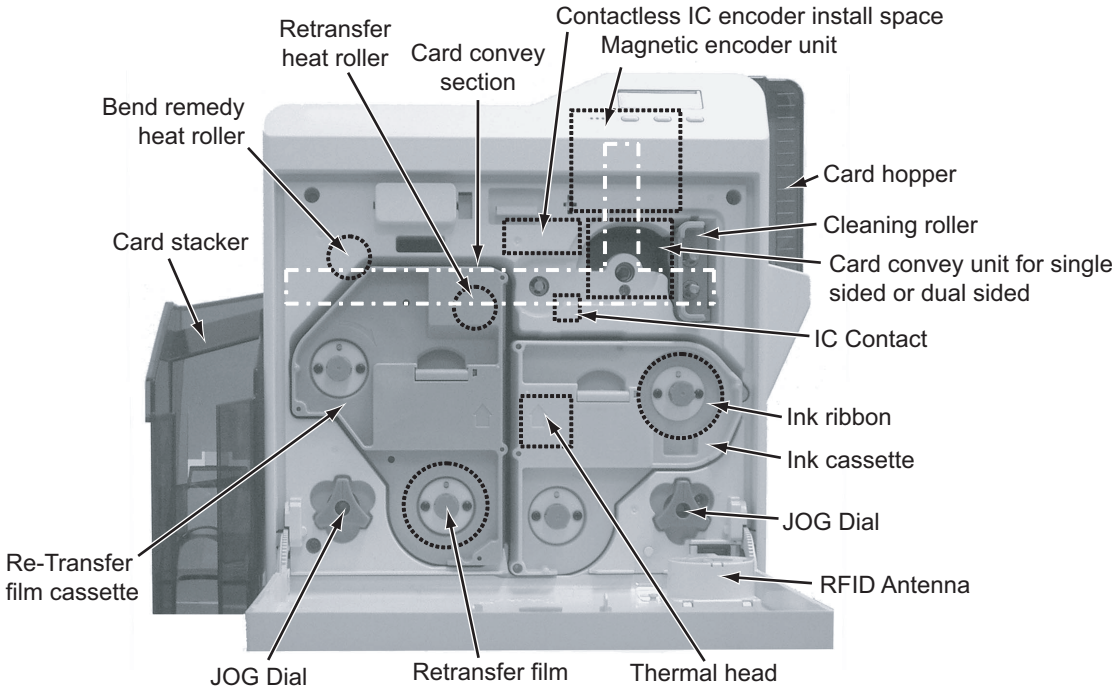
SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

2.1 Name and functions of parts

2.1.1 Exterior



2.1.2 Internal mechanism

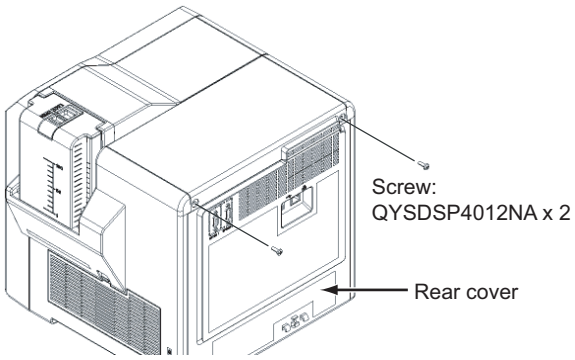


2.2 ATTACHING THE SEPARATELY SOLD PARTS

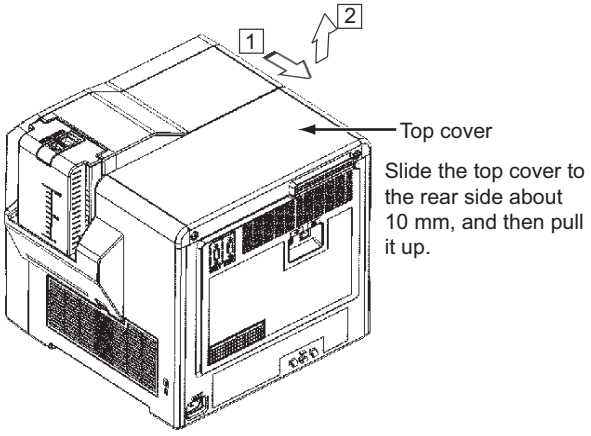
2.2.1 Preparation

Before connecting the separately sold parts, remove the top cover and the rear cover to pull open the MAIN Board.

(1) Remove the two screws attaching from the rear side of the main unit.

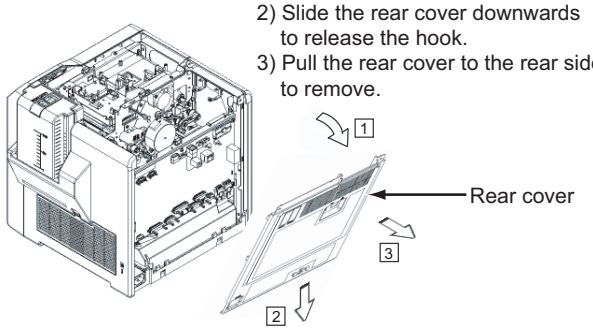


(2) Remove the top cover by sliding it to the direction of the arrow.

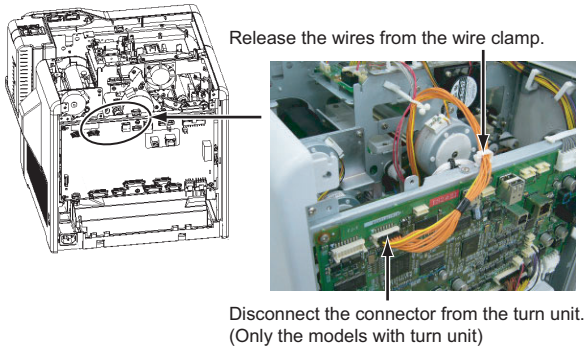


(3) Remove the rear cover by pulling it open to the rear side.

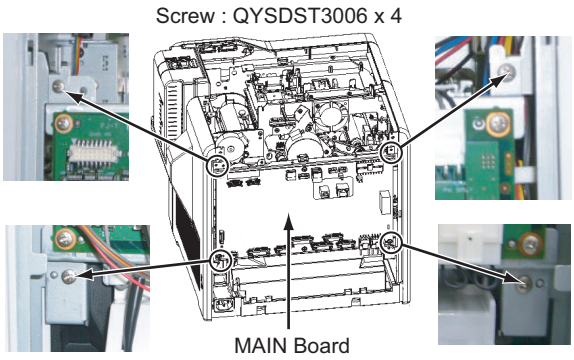
1) Swing open the upper part to the rear side on the axis of the lower part.
2) Slide the rear cover downwards to release the hook.
3) Pull the rear cover to the rear side to remove.



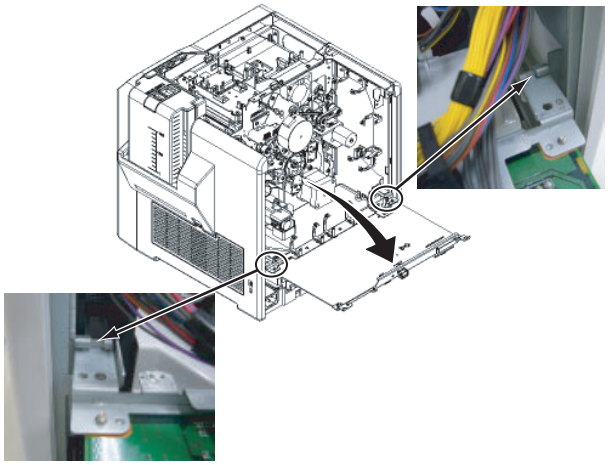
(4) Disconnect the wire connected to the MAIN Board.



(5) Remove the four screws attaching the brackets that fix the MAIN Board.



(6) Pull open the MAIN Board, and hook the two brackets at the bottom of the MAIN Board to the frame of the main unit.



- Be careful not to catch wires in between.

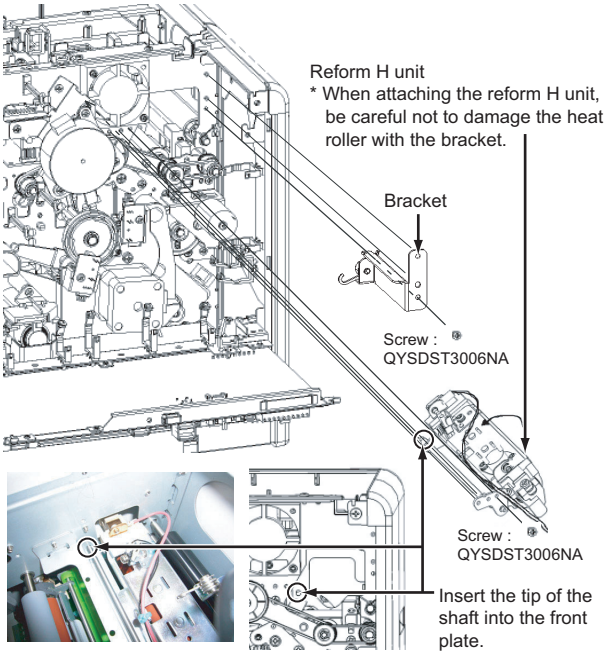
2.2.2 Attaching the reform H unit

Note:

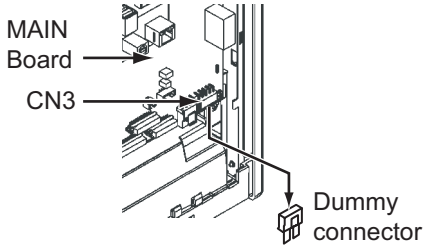
After mounting the reform H unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

(1) Insert the reform H unit, and fix it with a screw.

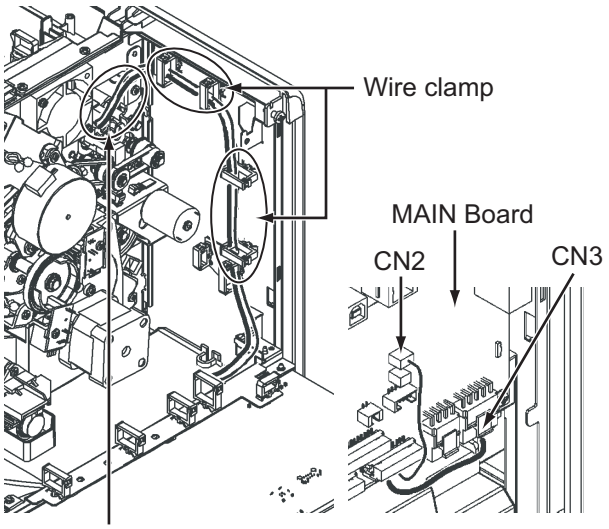
(2) Fix the bracket with an attaching screw.



(3) Remove the dummy connector connected to the CN3 on the MAIN Board. (Only when attaching the reform H unit)



(4) Guide the wires from the reform H unit through the wire clamps as shown in the drawing, and then connect the wires to the MAIN Board.



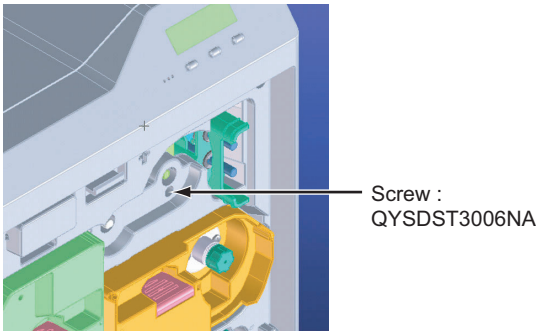
As the reform H unit moves up and down during operation, be sure to allow about 1 to 2 cm wire slack.

2.2.3 Attaching the IC contact unit

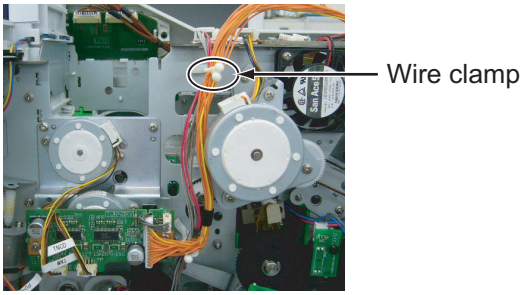
Note:

After mounting the IC contact unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

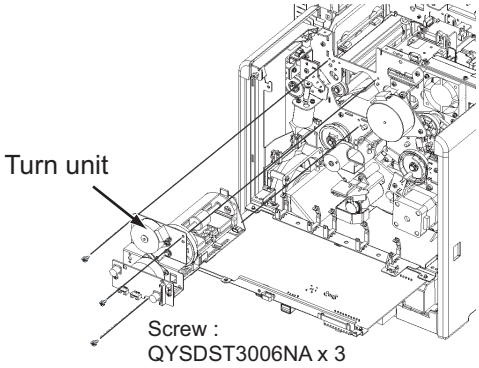
(1) Remove the screw attaching the turn unit from the front side of the main unit.



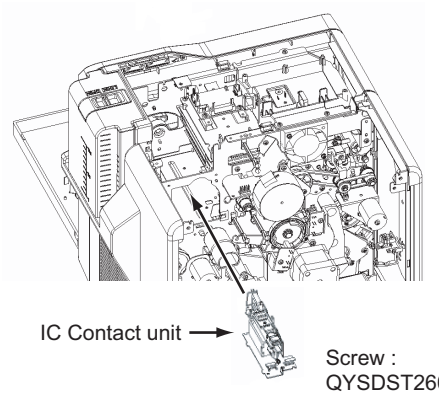
(2) Remove the wires, which come from the turn unit, from the wire clamp.



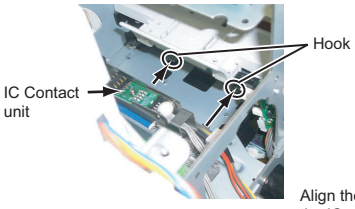
(3) Remove the three screws attaching the turn unit, and then pull out the turn unit. (Only the models with turn unit)

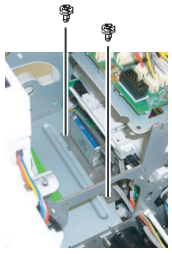


(4) Mount the IC contact unit.



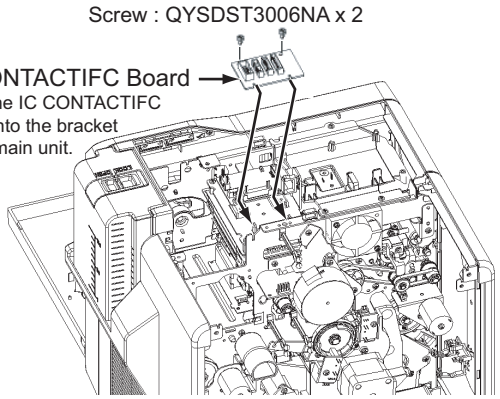
Slide the IC contact unit into the hook of the bracket on the main unit.



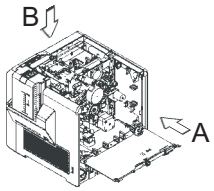


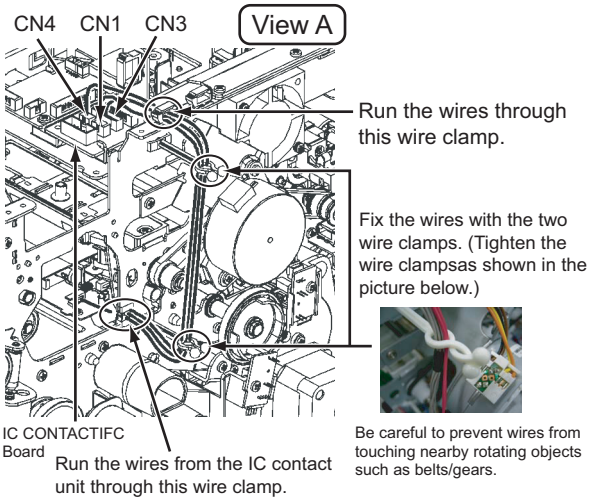
Align the screw holes, make sure that the IC contact unit does not move, and then fix the IC contact unit with the screws.

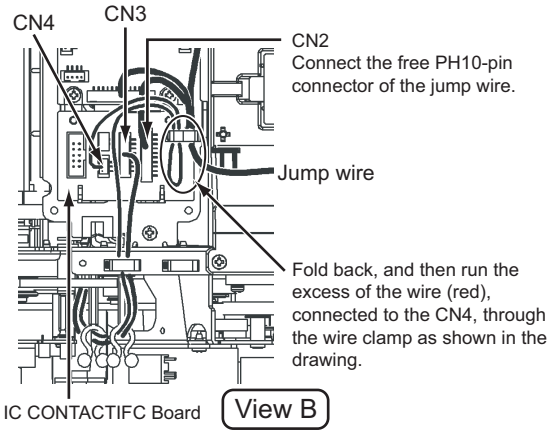
(5) Attach the IC CONTACTIFC Board.



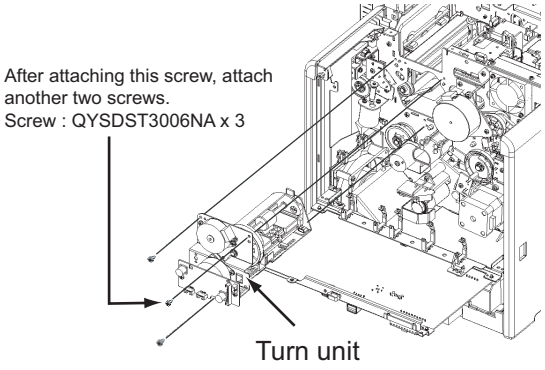
(6) Connect the wire from the IC contact unit following the drawing below.

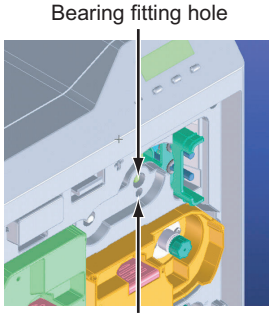


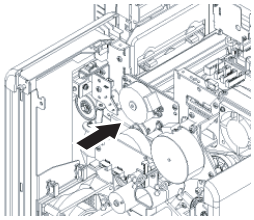




(7) Reattach the turn unit.

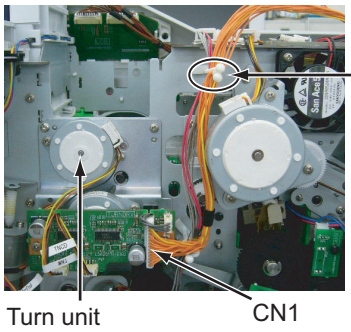






Make sure that the turn unit bearing securely fits the hole on the main unit, and the screw holes align.
Push the turn unit from the rear side to attach the screw.

(8) Connect the wires from the turn unit following the picture below.



Be careful to prevent wires from touching nearby rotating objects such as belts/gears.



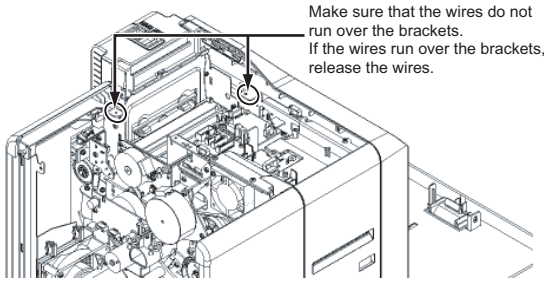
(Tighten the wire clamp as shown in the picture above.)

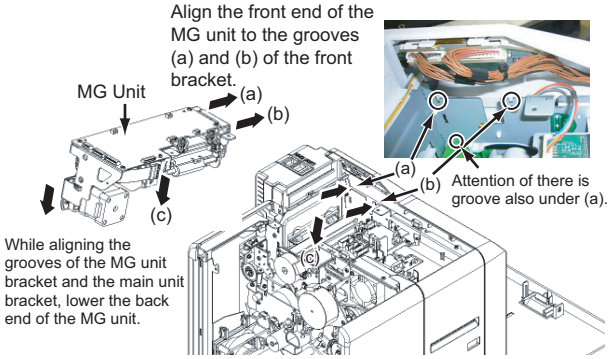
2.2.4 Attaching the MG unit

Note:

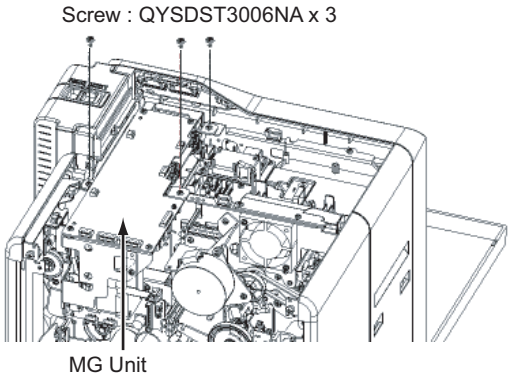
After mounting the MG unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

(1) Mount the MG unit.

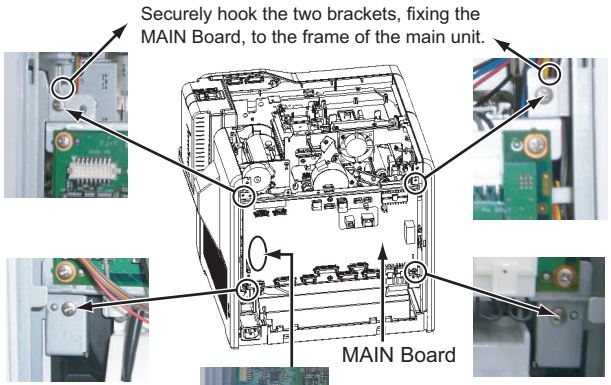


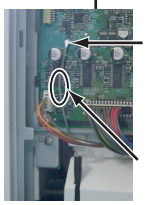


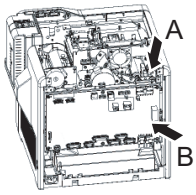
(2) Fix the MG unit with the three screws.



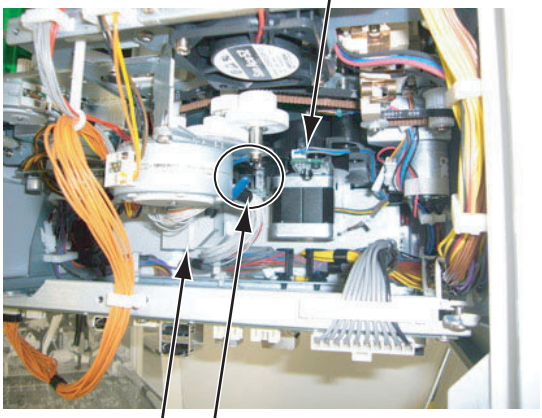
(3) Close back the MAIN Board to its original position, and fix the MAIN Board with the four screws.



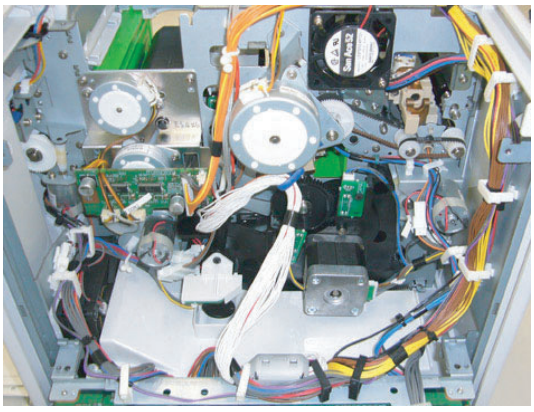




View A

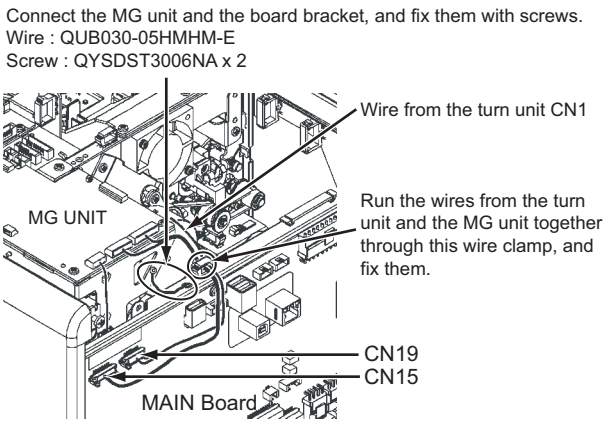


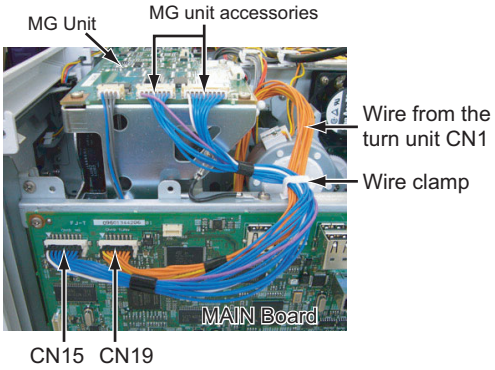
View B



Opened MAIN Board

(4) Connect the wires from the MG unit and the turn unit following the drawing below.



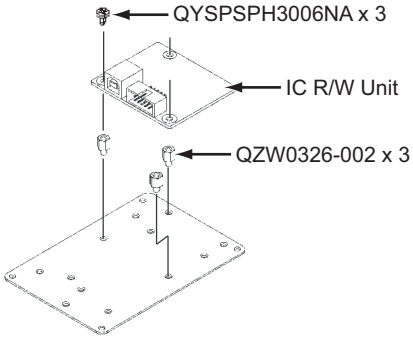


2.2.5 Attaching the IC R/W unit

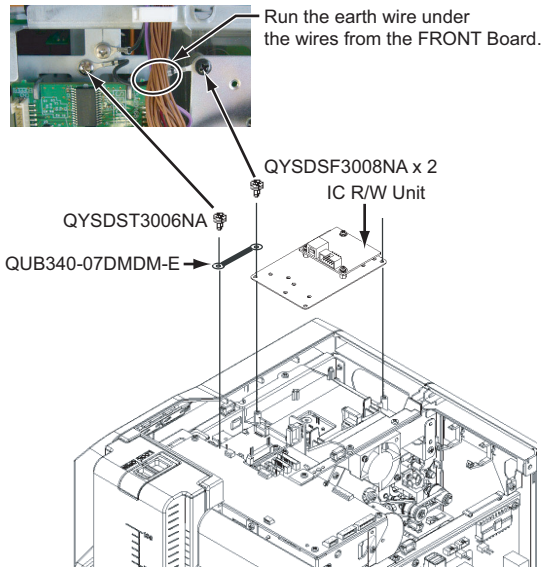
Note:

After mounting the IC R/W unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

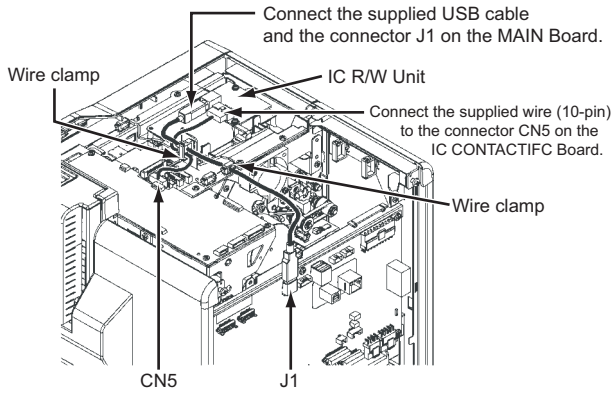
(1) Attach the IC R/W unit to the plate.



(2) Mount the IC R/W unit.



(3) Connect the wires from the IC R/W unit following the drawing below.



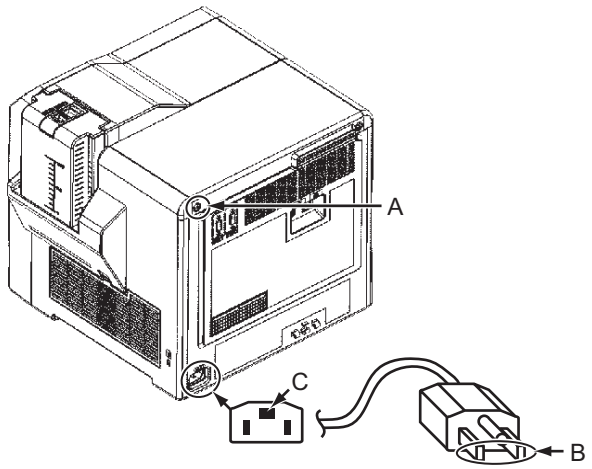
2.2.6 Attaching the top cover and the rear cover

(1) Attach the top cover and the rear cover in the reverser procedure of disassembly.

2.3 Check details after mounting separately sold parts

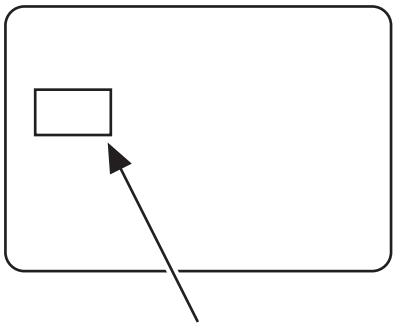
	Item	Check details	Required tools
1	Reform H unit	The warpage of the printed card should be within the specs (1.5 mm).	Blank card
2	IC Contact unit	Check the IC contact position mark using a blank card and a contact label. • Service mode > Offline Test > Test the IC (Contact). • If the position is out of specs, Maintenance > OffsetContact to adjust the position. (See 2.3.1 IC contact position adjustment)	Blank card, Contact label
		The card written with an application should be read by the reader. (Check in the USB and Ethernet connections)	Contact IC card Contact IC reader
3	MG Unit	Service mode > Offline Test > test the MG. • The test should be finished normally.	MG card
		The card written with an application should be read by the reader. • There is no adjustment for an MG unit after mounting because MG units are shipped after being position adjusted. Check for normal operation only.	MG reader
4	Running after mounting the separately sold parts (For all separately sold parts)	Test for normal printing on about 10 cards • Service mode > Offline Test > print	Evaluation card

	Item	Item	Conditions & specs			Test point
5	Safety test (for all separately sold parts)	Withstand voltage test	Timer	Leak current	Test voltage	(With the POWER SW: ON) GND C on the AC inlet in the drawing below | Bipolar B on the power cord in the drawing below
			2 to 3 sec.	10mA	AC1600±50V	
		Insulation resistance test	Test voltage		Insulation resistance value	
			DC 500V		100MΩ and over	
		Grounding continuity test	Timer	Test current	Spec value	(With the POWER SW: ON) Screw A on the top left of the rear panel in the drawing below | GND C on the AC inlet in the drawing below
			3 to 4 sec.	AC25A	0.1Ω or under (Without power cord)	

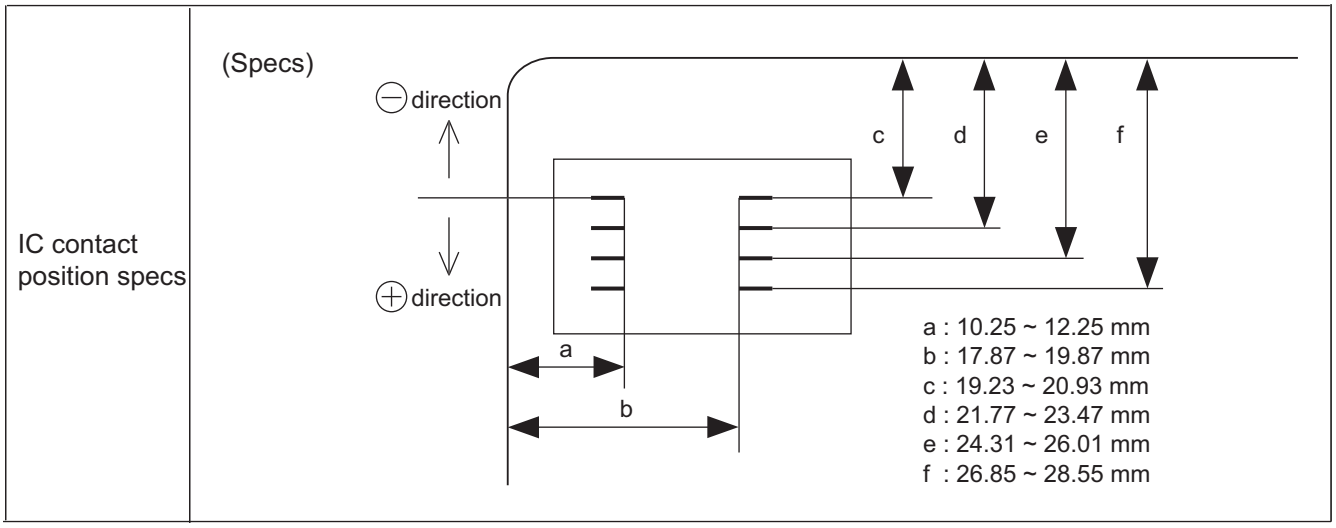


2.3.1 IC contact position adjustment

Apply a contact label (part number: KXL46372-001) on the IC chip of a contact IC card.
Select the IC contact test from “off line test” in the service mode to perform the test.
After the test, measure the IC contact position mark on the contact label using a vernier caliper to check if the position stays within the specs.
If the position does not stay within the specs, correct the position in the “OffsetContact” mode in the service mode.
When the position is corrected, turn off the power and turn it on again before testing the IC contact.



Contact label
(part number:KXL46372-001)



SECTION 3
DISASSEMBLY

Before disassembly, be sure to turn OFF the power and unplug the power cord.

3.1 Removing the covers (See figure 1 to figure 4)

(1) Remove the two screws **A** attaching the top cover unit.



Fig.1

(2) Slide the top cover unit to the rear side, then remove the top cover unit.



Fig.2

(3) Pull the rear cover unit open to the rear side, then remove the rear cover unit.



Fig.3

(4) Remove the two screws **C** attaching the side cover U-R and side cover U-L, then remove the side cover U-R and side cover U-L.

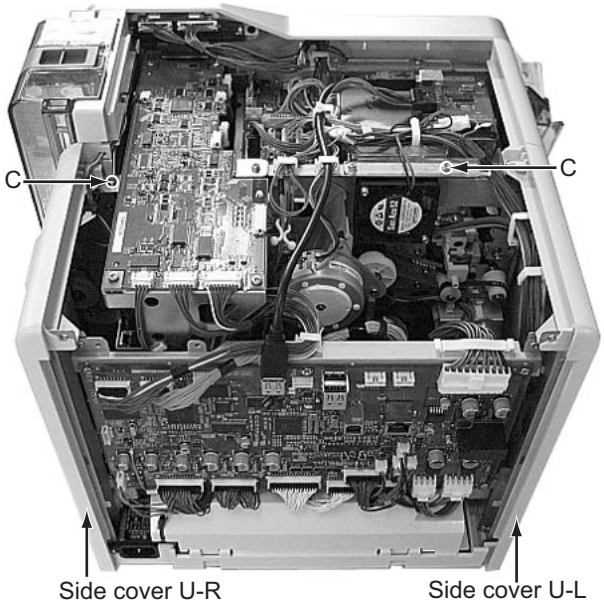


Fig.4

3.2 Removing the front panel unit (See figure 5 to figure 12)

(1) Remove the Media F CA unit, the Ink F CA unit, and the CL Roller unit.

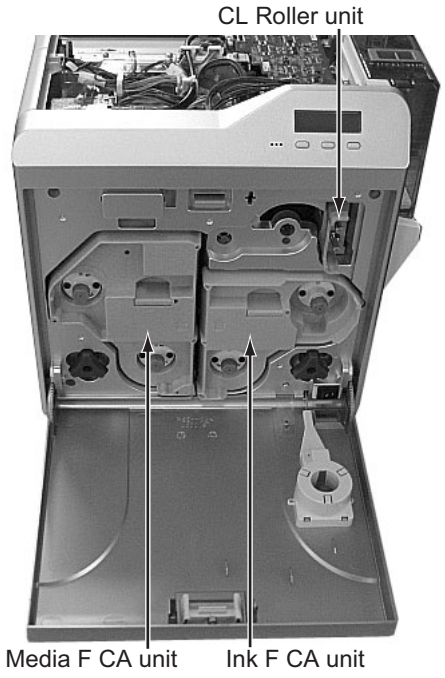


Fig.5

(2) Remove the two screws **D** attaching the cover, then remove the cover.

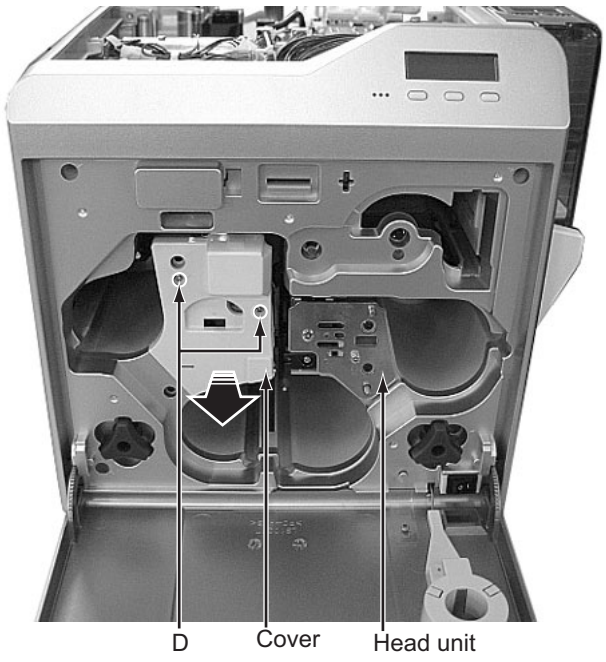


Fig.6

(3) Remove the four screws **E** attaching the front panel unit.
- Be careful not to break the cable.

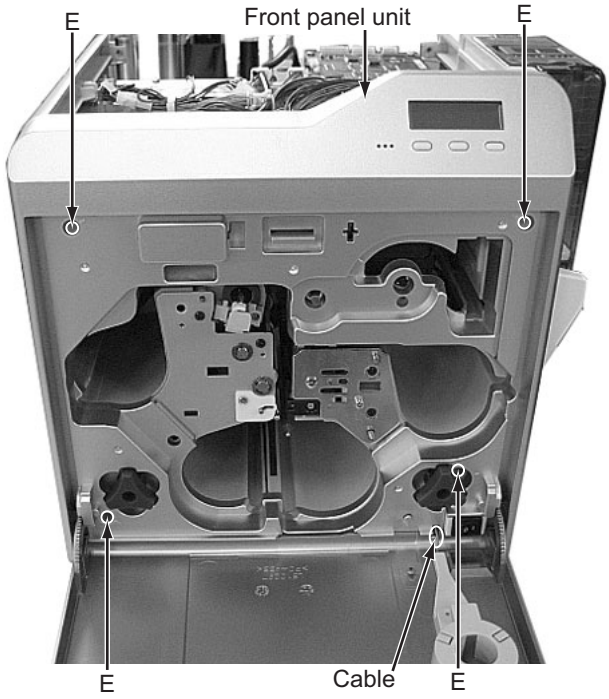


Fig.7

(4) Disconnect the two cables from the connectors on the front board.

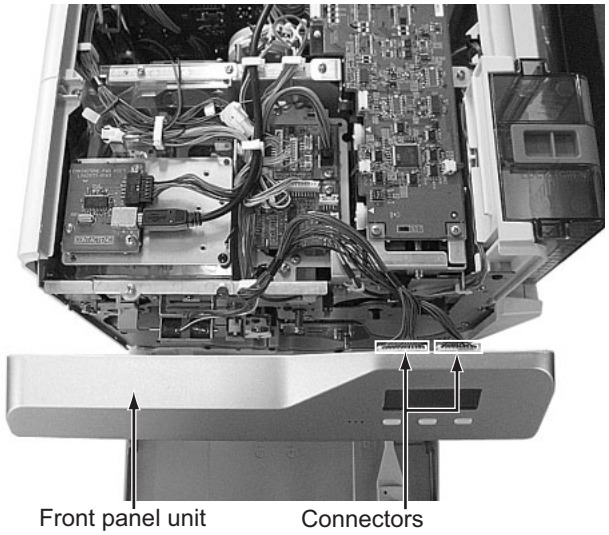


Fig.8

(5) Remove the one screw **F** attaching the cover.
(6) Press the two tabs, pull up the cover at the point marked with an arrow, and then remove the cover.

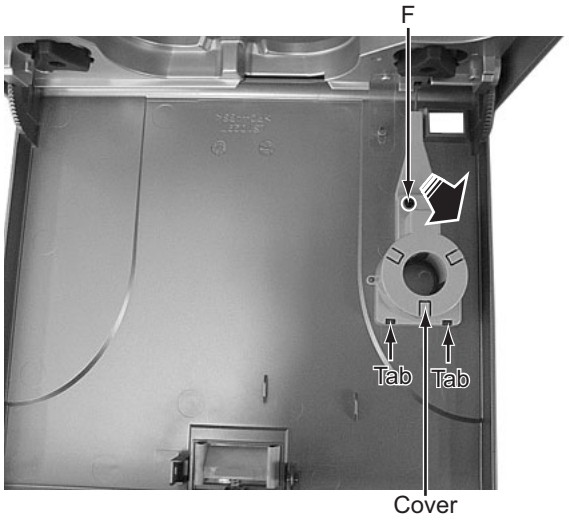


Fig.9

(7) Front panel unit with the cover removed.

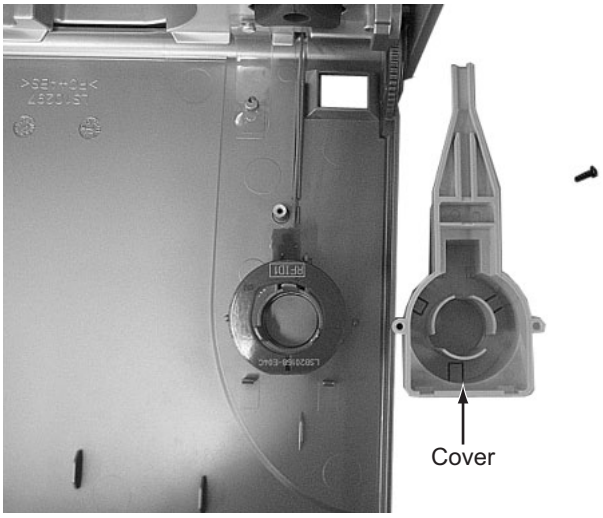


Fig.10

(8) Disconnecting the cable from the RFID1 board detaches the front panel unit from the main unit.

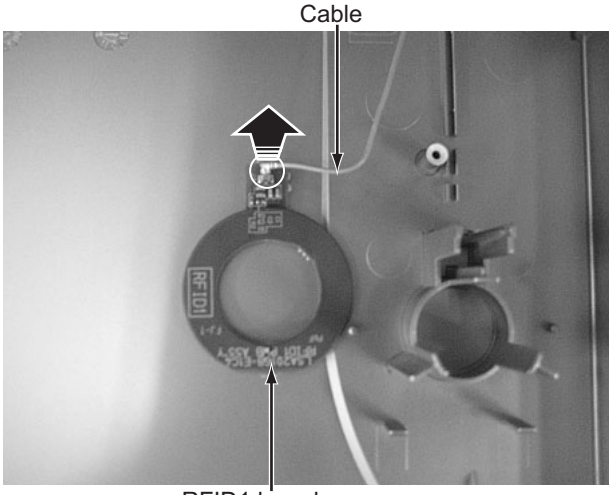


Fig.11

(9) Main unit with the front panel unit removed.

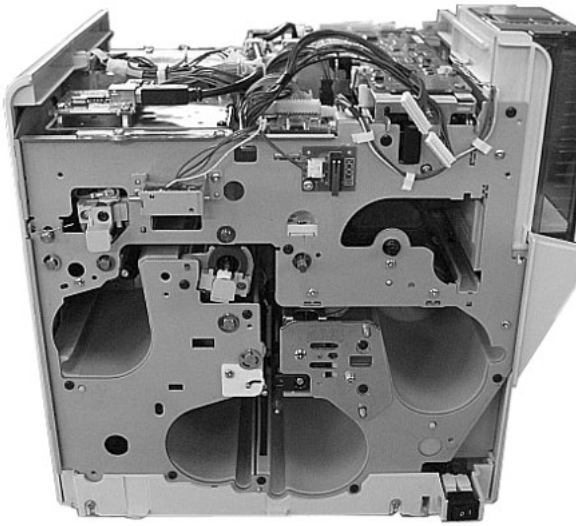


Fig.12

3.3 Removing the major boards and major units (See figure 13 to figure 33)

(1) Disconnect the four cables from the connectors on the main board.
(2) Remove the four screws **G** attaching the main board.

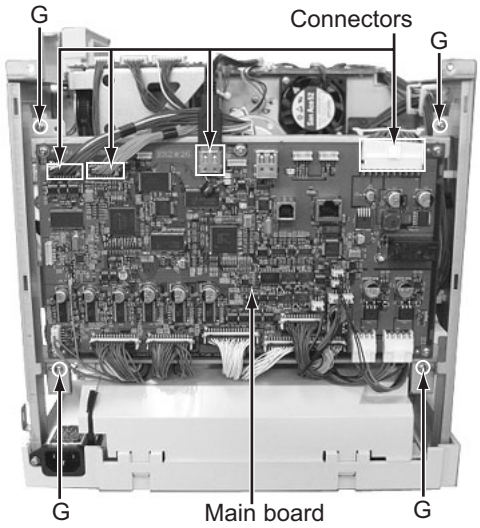


Fig.13

(3) Pull the main board open to the rear side.

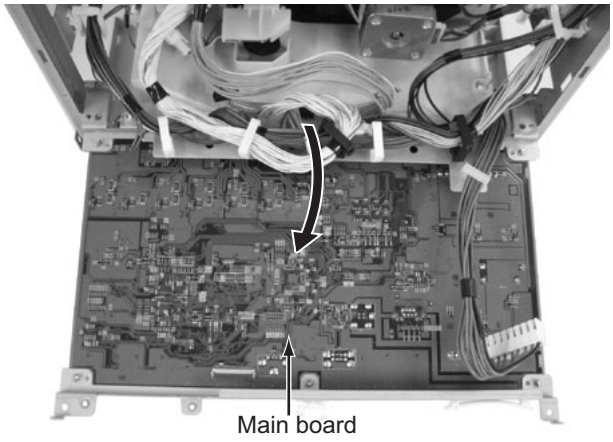


Fig.14

(4) Hanging the left and right brackets on the main board to the hooks on the chassis prevents the main board from falling.

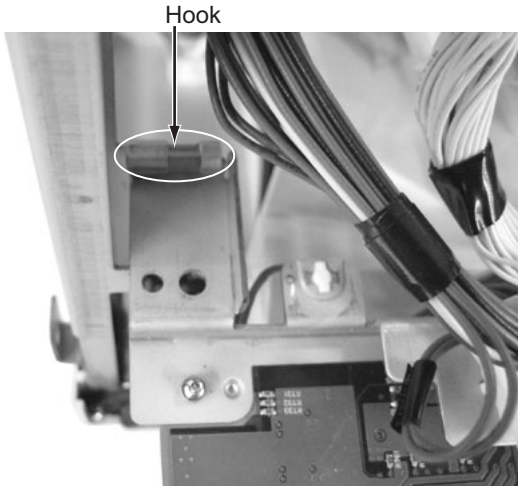


Fig.15

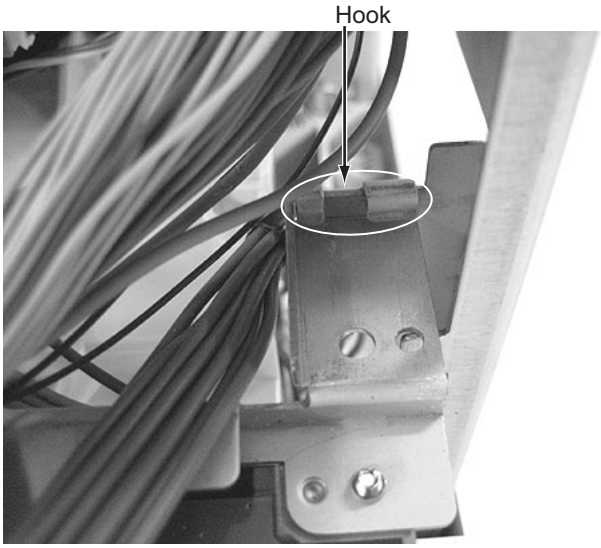


Fig.16

(5) Remove the three screws **H** attaching the CF-7MGS UNIT, then remove the CF-7MGS UNIT.

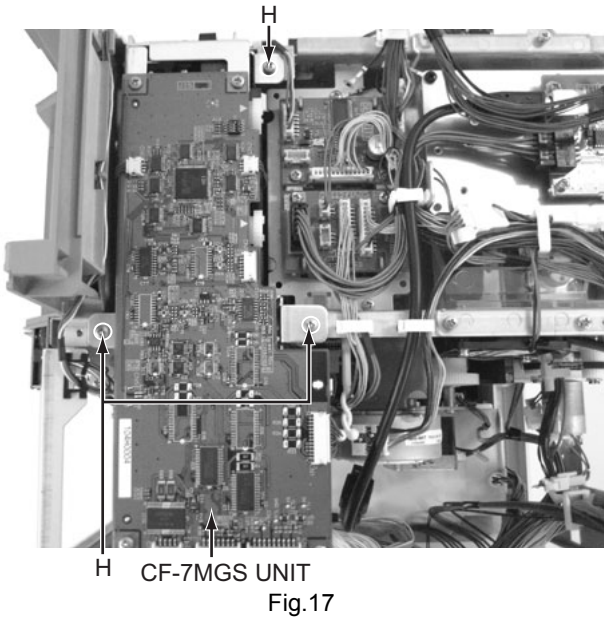


Fig.17

(6) Removed CF-7MGS UNIT.

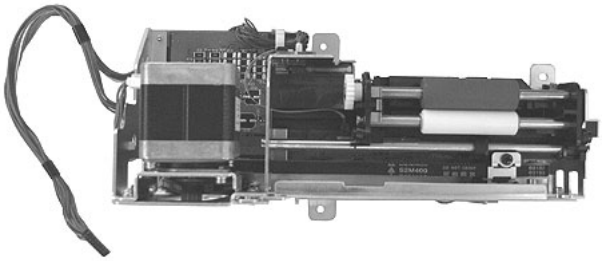


Fig.18

(7) The KEY LOCK UNIT consists of a SECURITY PWB ASSY and two solenoids.

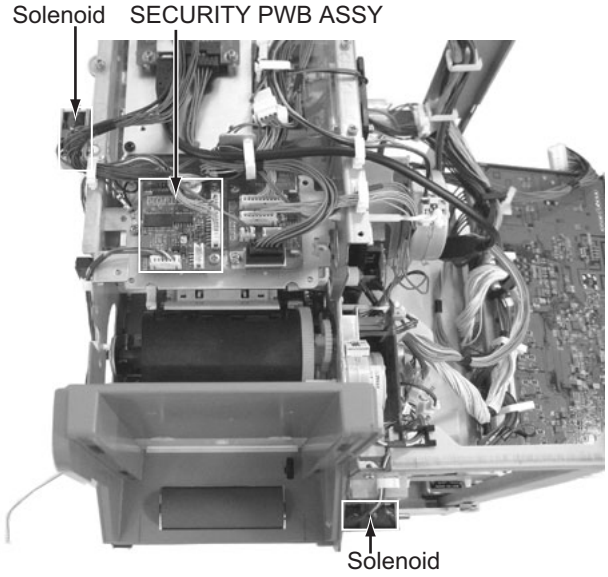


Fig.19

(8) Remove the one screw **J** to release the solenoid on the card stocker side.

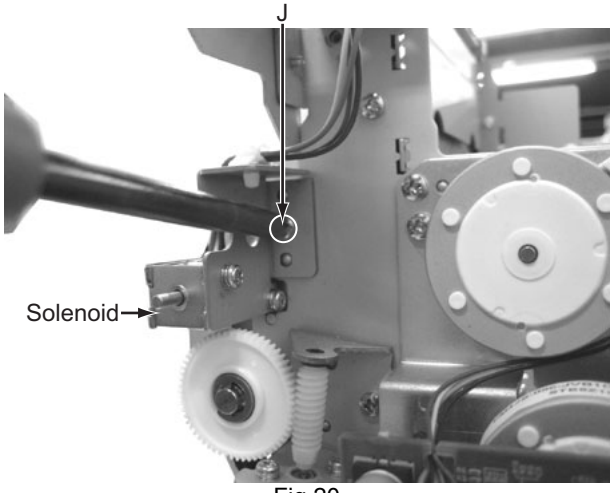


Fig.20

(9) Remove the four screws **K** to release the SECURITY PWB ASSY and the solenoid on the front side.

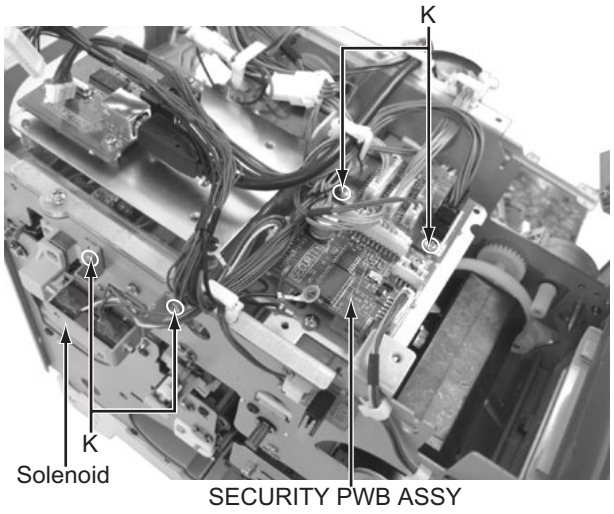


Fig.21

(10) Removed KEY LOCK UNIT SET.(LS31237-201A)

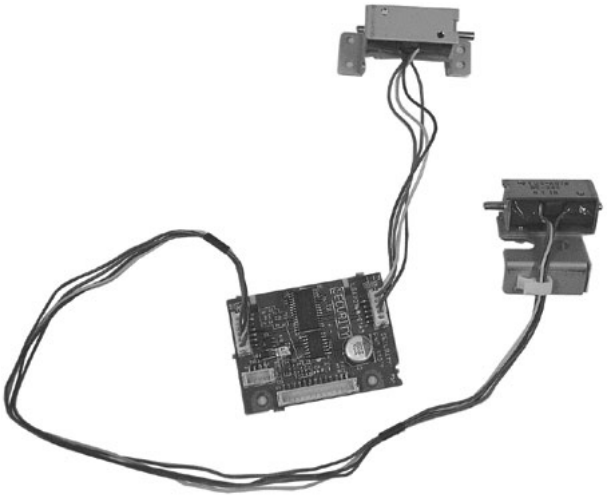


Fig.22

(11) Remove the two screws **L** attaching the IC R/W UNIT, then remove the IC R/W UNIT.

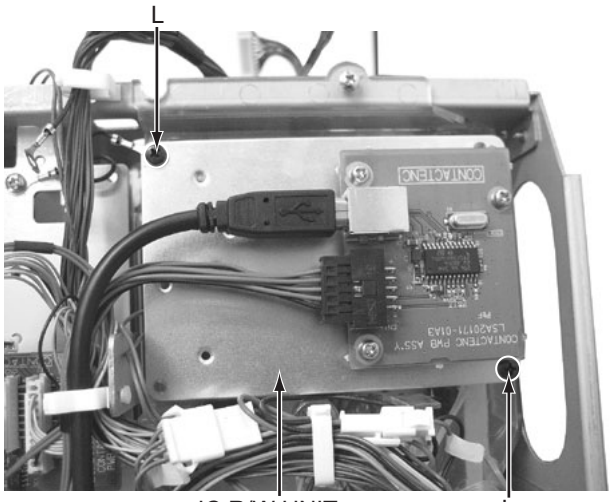


Fig.23

(12) Removed IC R/W UNIT.



Fig.24

(13) Remove the one screw **M** attaching the CONTACTIFC board, then slide the CONTACTIFC board forward to remove.

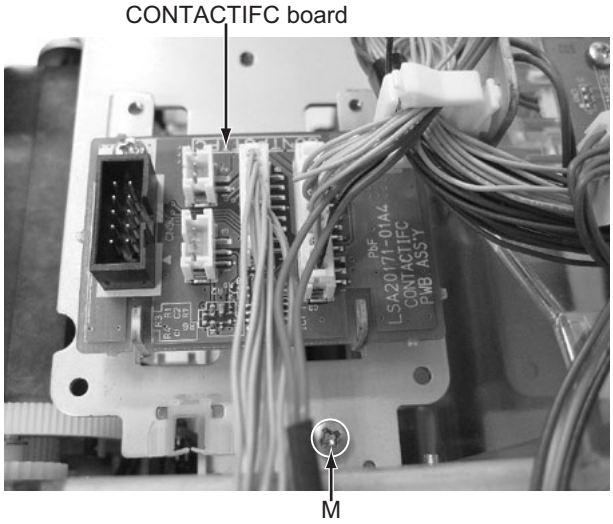


Fig.25

- To attach the CONTACTIFC board, insert the part **a** into the slit on the front side.

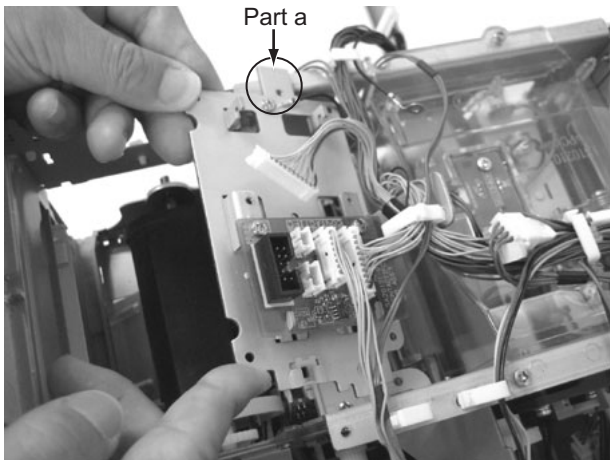


Fig.26

(14) Remove the two screws **N** attaching the cover, then remove the cover.

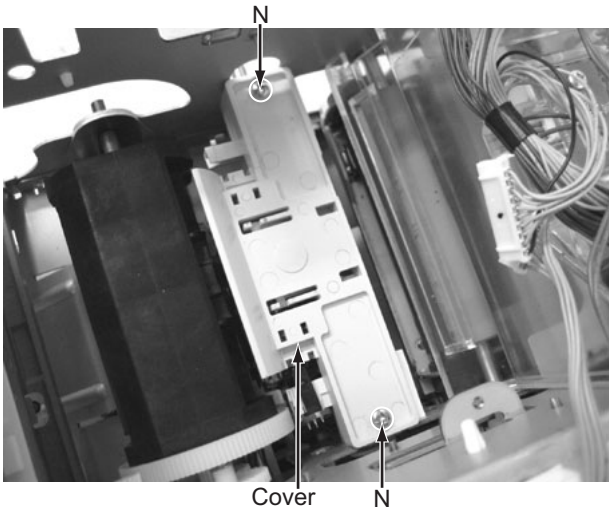


Fig.27

(15) Before removing the IC CON UNIT, the turn unit needs to be removed first.

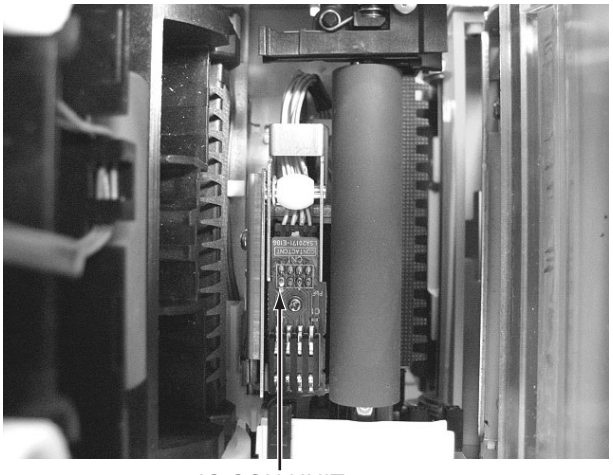


Fig.28

(16) Remove the four screws **P** attaching the turn unit from the front side and the rear side.

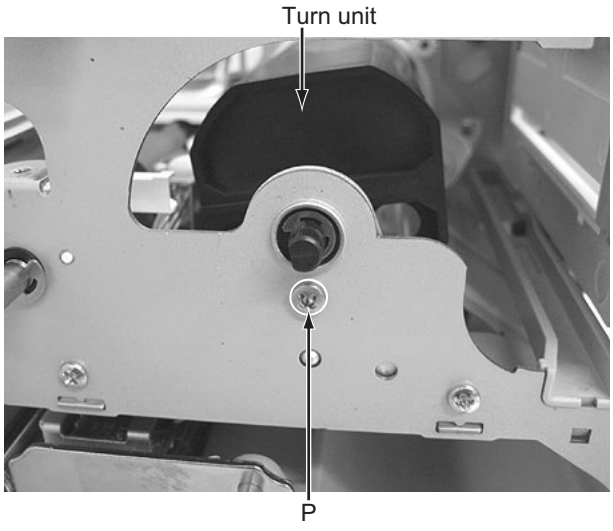


Fig.29

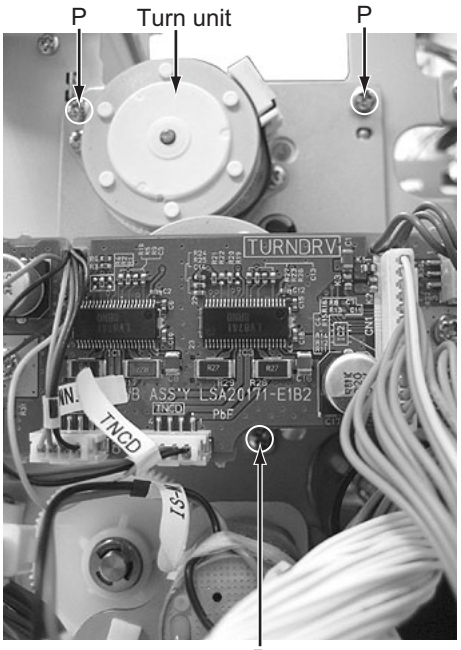


Fig.30

(17) Removed turn unit.(CF-7FU)

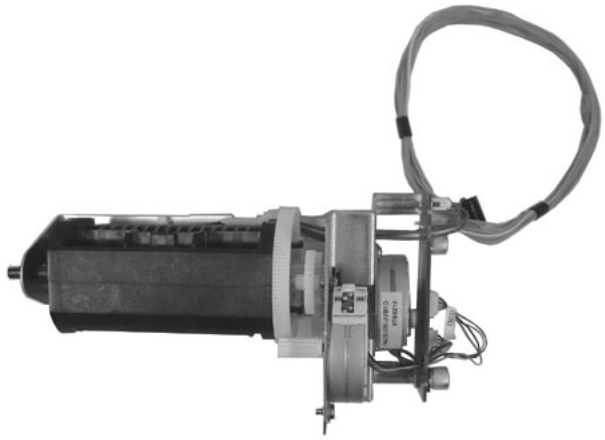


Fig.31

(18) Remove the two screws **Q** attaching the IC CON UNIT section, then remove the IC CON UNIT section.

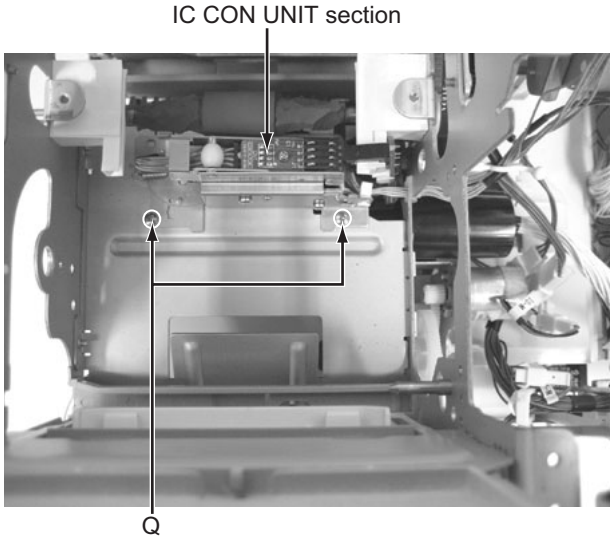


Fig.32

(19) Removed CONTACTIFC board and IC CON UNIT.
JIS : CF-7CCJ
ISO: CF-7CCS

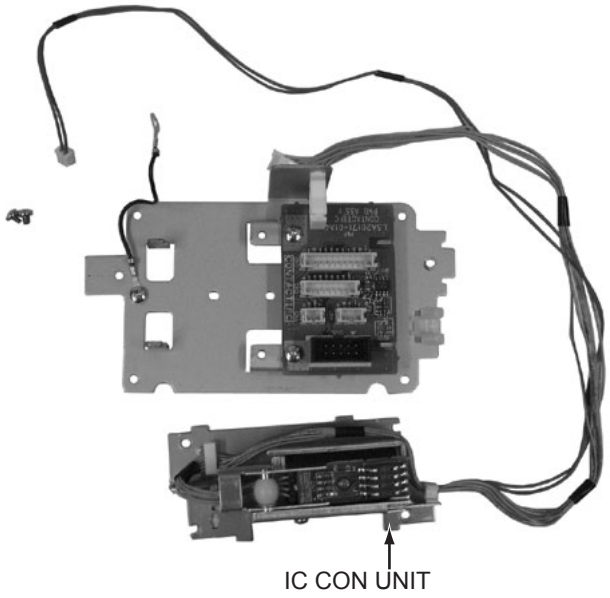


Fig.33

3.4 Replacing the head unit (See figure 34 and figure 35)

(1) Remove the one screw **R** attaching the head unit.

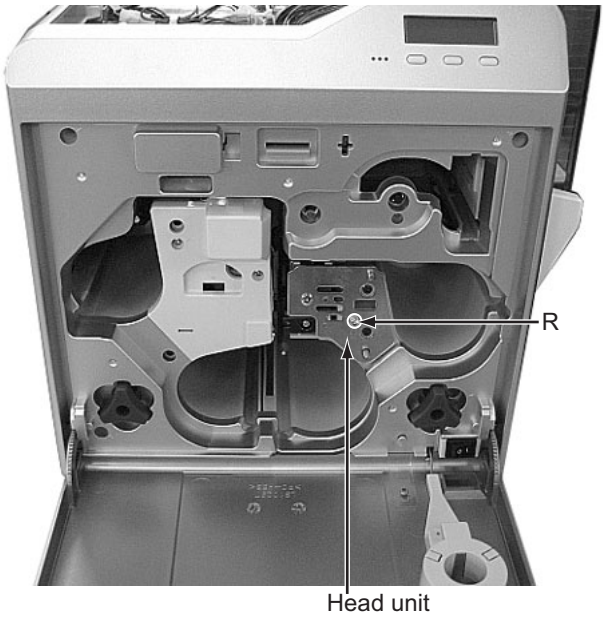
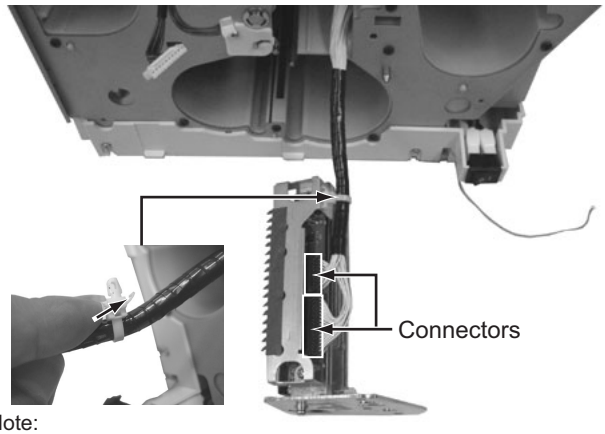


Fig.34

(2) Pull out the head unit paying attention to the cable, then disconnect the two connectors.



Note:
* Do not cut the cable lock. This cable lock is removable.
* Press to loosen the lock in the direction of the arrow. The cable lock can be removed.

Fig.35

3.5 Removing the reform H unit (See figure 36 and figure 37)

(1) Remove the one screw **S** attaching the reform H unit, then pull out the reform H unit.
(2) To replace the heater only, remove the one screw **T**.

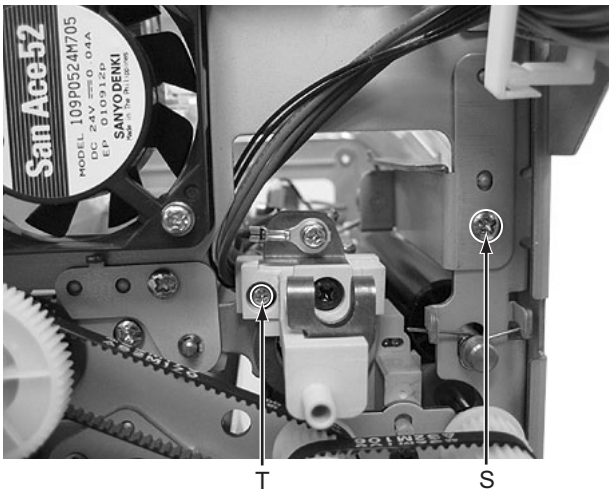


Fig.36

(3) Removed reform H unit.



Fig.37

3.6 Replacing the heater on the heat rol unit (See figure 38 and figure 39)

(1) Remove the one screw **U** attaching the cover from the front side.

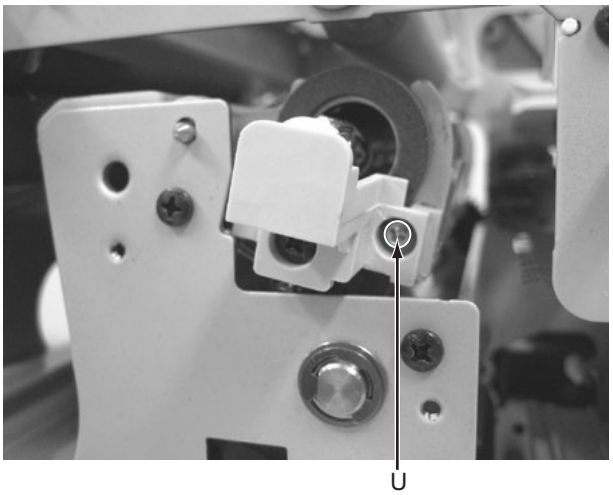


Fig.38

(2) Pulled out heater.

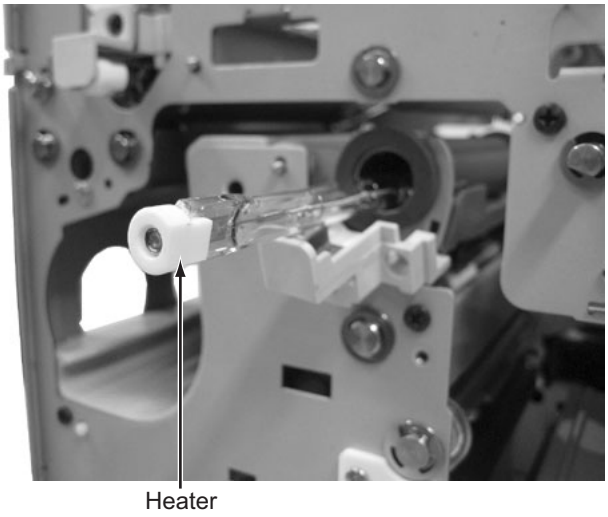


Fig.39

3.7 Removing the motor base unit (See figure 40 to figure 43)

(1) Push two tabs on the PS cover, then remove the PS cover.

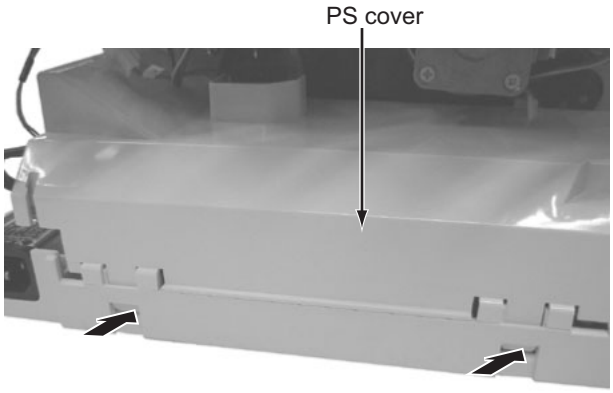


Fig.40

(2) Main unit with the PS cover removed

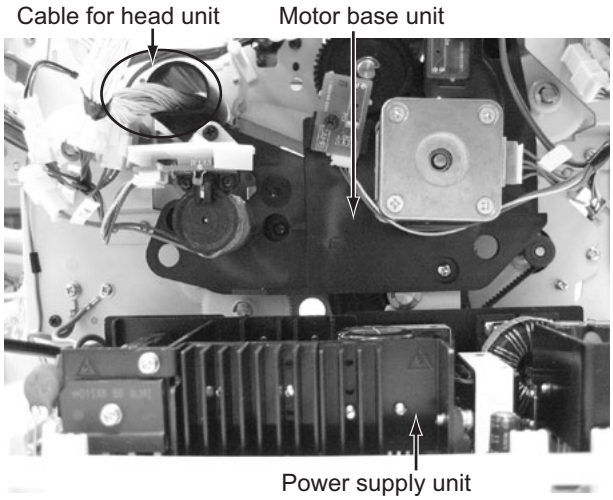


Fig.41

(3) Remove the five screws **V** attaching the motor base unit, then remove the motor base unit.

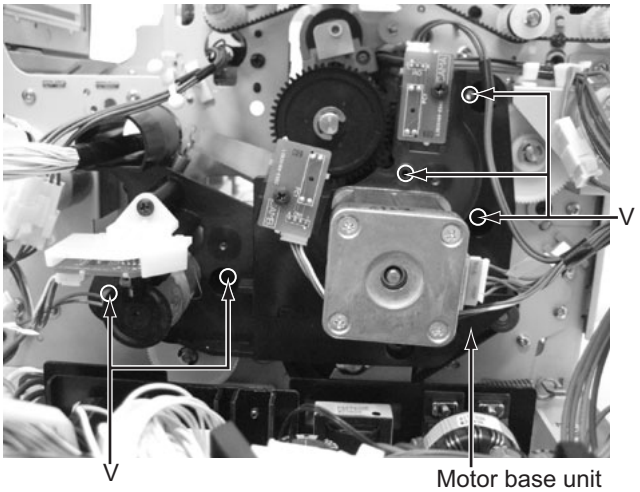
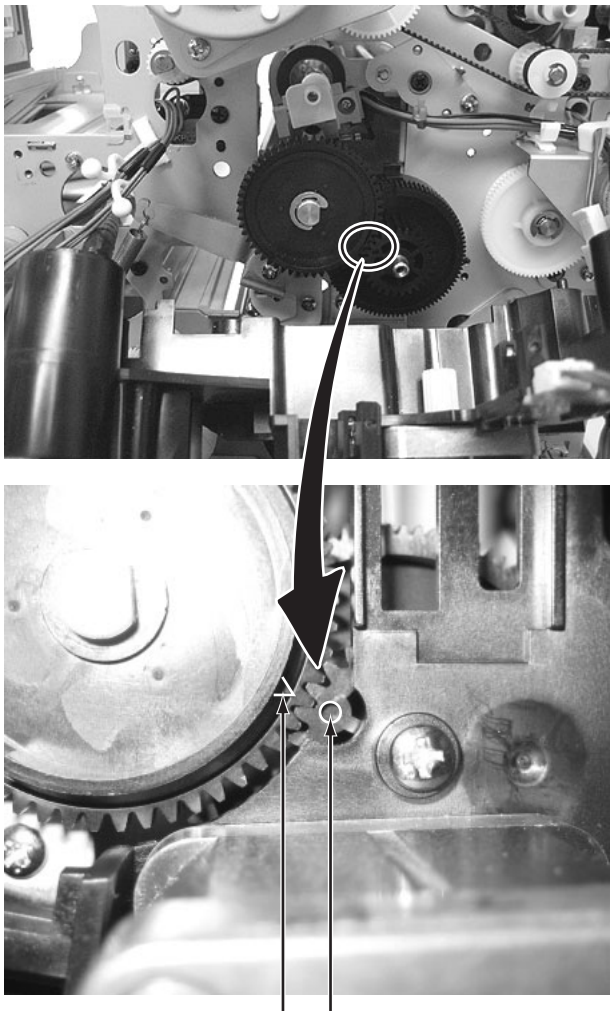


Fig.42

(4) Main unit with the motor base unit removed.



When the gear is detached, the position of a triangular sign and a round sign is matched and installed.

Fig.43

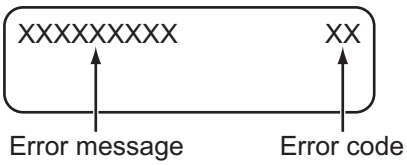
SECTION 4
ADJUSTMENT

This service manual does not describe ADJUSTMENT.

SECTION 5
TROUBLE SHOOTING

5.1 When an error message is display

When the error occurs, the error message and the error code are displayed in the operation panel.
Solve the error referring to the following when the error occurs.



5.1.1 No Card

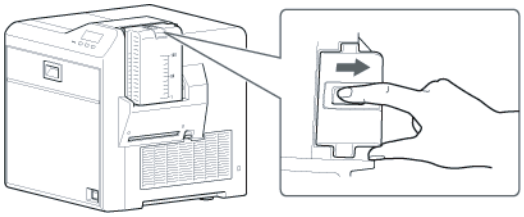
Cards have run out. Replenish the cards. Or, The card hopper is not attached. Attach the card hopper.



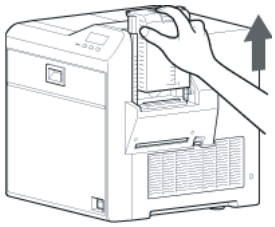
Note:

- Do not touch the printing surface of the card. Touching it may cause printing errors. Put on the supplied gloves when handling the cards.
- When using new cards, separate them one by one before setting them in the printer. Cards may be adhered to each other due to static, thus causing card jams.
- Align the cards before setting them in the printer. Otherwise, the card hopper cover may not close properly, and this may damage the printer.
- Printing the card on the side with the magnetic stripe may cause printing errors or damage to the card's functions. If you want to do so, consult our authorized dealers in advance.
- To set cards with both functions (magnetic stripe and contact IC), follow the procedure for setting the contact IC card.

(1) Set the card hopper knob to [OPEN].

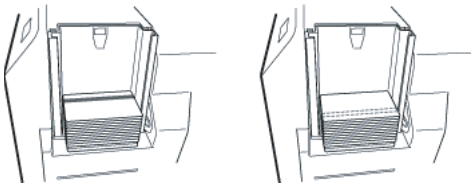


(2) Lift to remove the card hopper cover.

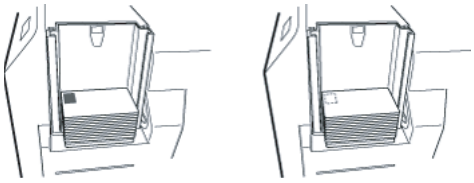


(3) Align the orientation of the cards, and set them in the printer.

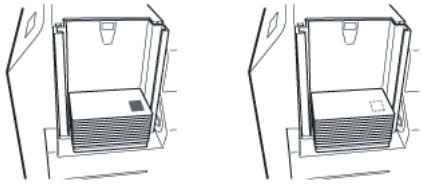
[Magnetic cards]
Set the card with the magnetic stripe facing upward and toward the printer, or facing downward and toward you.



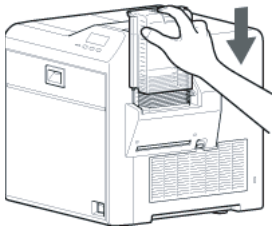
[JIS contact IC cards]
Set the card with the Contact IC terminal facing upward and toward the front of the printer, or downward and toward the front of the printer.



[ISO contact IC cards]
Set the card with the Contact IC terminal facing upward and toward the rear of the printer, or downward and toward the rear of the printer.



(4) Install the card hopper cover.



5.1.2 Jam (Hopper)

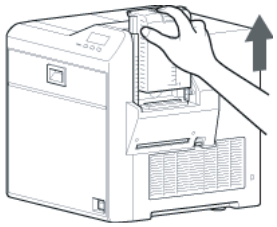
Card jam in the card hopper unit. Remove the jammed card.

Jam (Hopper)	90

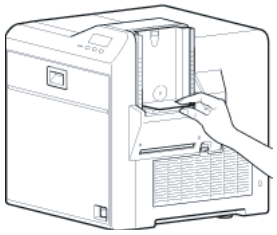
Note:

- Do not apply excessive force on the card hopper. Doing so may damage it.
- Do not touch the printing surface of the card. Touching it may cause printing errors. Put on the supplied gloves when handling the cards.

(1) Remove the card hopper.



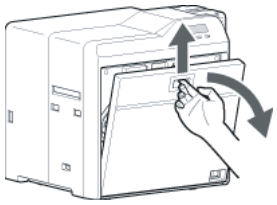
(2) Remove the loaded cards, and pull out the jammed card with a hand.



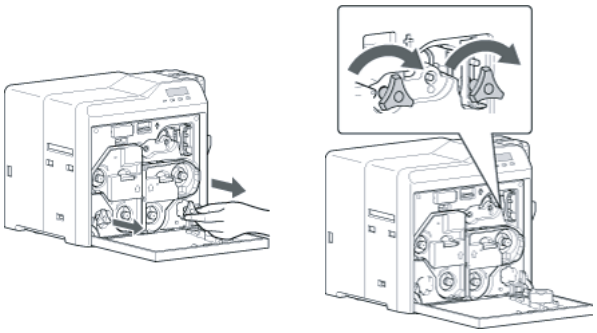
(3) Install the card hopper cover.

[If the card cannot be pulled out by hand]

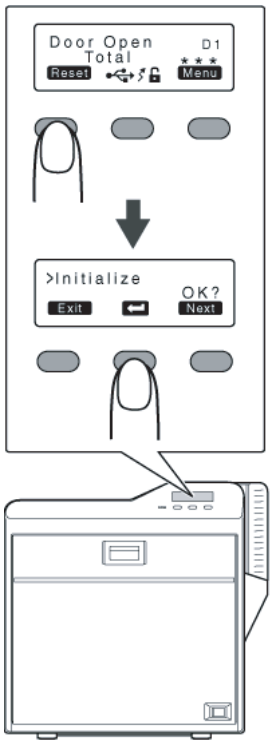
a) Open the printer door.



b) The retransfer part and the cleaning unit are rotated in the direction of clockwise by using the jog dial.



c) Close the printer door, and press [RESET] → ↵ to initialize the printer.

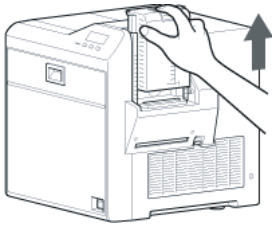


5.1.3 Jam (Turn Over)

Card jam in the turnover unit. Remove the jammed card.

Jam (Turn Over)	91

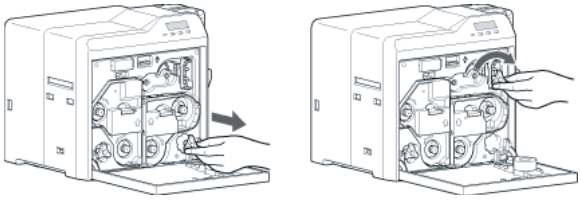
(1) Remove the card hopper.



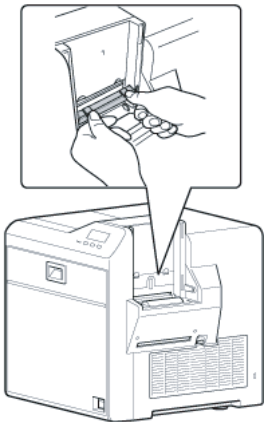
(2) Open the printer door, and then remove the cleaning unit.

[If the cleaning unit cannot be removed]

a) The cleaning unit is rotated in the direction of clockwise by using the jog dial.



b) The cover of the card hopper is opened. When the card can be removed, it removes.

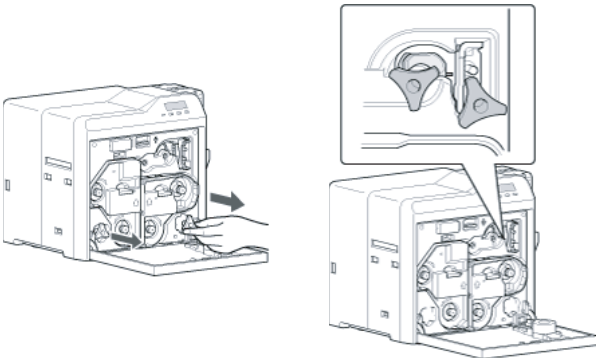


(3) The turnover part is rotated a little right and left by using the jog dial.

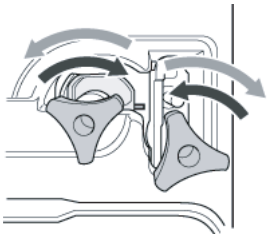
Note:

When the card has gone out of the turnover part, the turnover part cannot be rotated.

The turnover part and the cleaning unit are rotated in a right and left, opposite direction at the same time, and the card is moved to the turnover part.

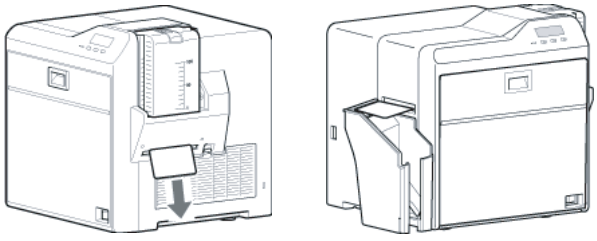


(4) The turnover part and the cleaning unit are rotated in a right and left, opposite direction at the same time, and the card is moved to the turnover part.



(5) Close the printer door, and press [RESET] → ↵ to initialize the printer.

- The card is discharged from the NG card outlet or card stacker.

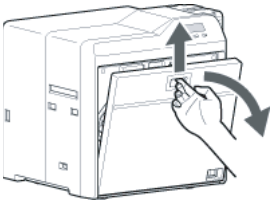


5.1.4 Jam (MG)

Card jam in the magnetic encoder unit. Remove the jammed card.

Jam (MG)	92

(1) Open the printer door.



(2) Restore the card to the magnetic encoder unit.
Use the jog dial to turn the cleaning unit.

(3) Turn the jog dial at the turnover unit to adjust the unit to a vertical position.
While doing so, make use of the printer's label as a reference.

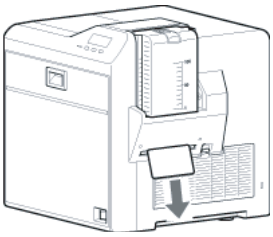
(4) Move the card to the center of the turnover unit
- Maintain the turnover unit in the vertical position.
- Turn the jog dial at the cleaning unit.

Check to ensure that the card moves to the turnover unit.

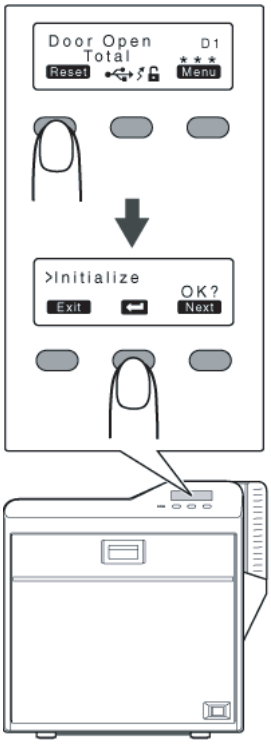
(5) Turn the jog dial attached to the turnover and cleaning units at the same time in opposite directions.
- Set the turnover unit to the horizontal position.

(6) Turn the jog dial of the turnover unit clockwise to an angle of 45 degrees.
- While doing so, make use of the printer's label as a reference.

(7) Turn the jog dial at the cleaning unit in the anti-clockwise direction.
- The card is discharged from the NG card outlet.



(8) Press [RESET] → ↵ to initialize the printer.

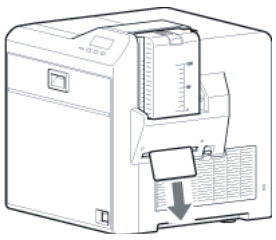


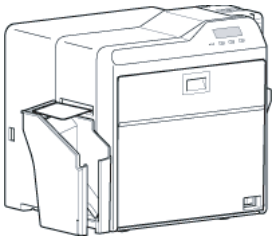
5.1.5 Jam (Transfer)

Card jam in the transfer unit. Remove the jammed card.

Jam (Transfer)	93

(1) Press [RESET] → ↵ to initialize the printer.
- The card is discharged from the NG card outlet or card stacker.



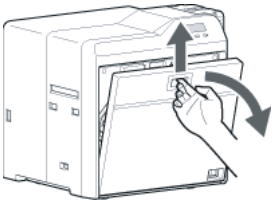


5.1.6 Jam (Discharge)

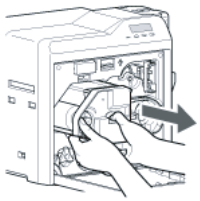
Card jam in the discharge unit. Remove the jammed card.

Jam (Discharge)	94

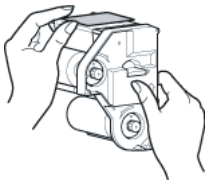
(1) Open the printer door.



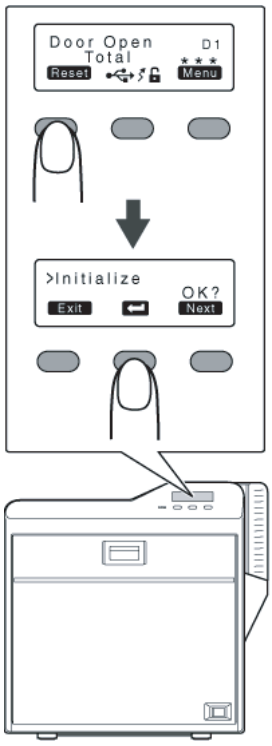
(2) The retransfer film cassette (left side) is taken out, and the inside of the printer is confirmed.



(3) When the card sticks on the retransfer film, the card is removed.



(4) Close the printer door, and press [RESET] → ↵ to initialize the printer.



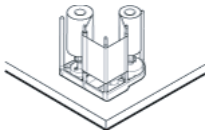
5.1.7 Film Serch

Retransfer film is broken. Repair it.

Film Serch	A1

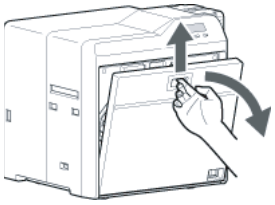
Note:

- Stand the cassette on a flat surface as illustrated in the diagram.
  Avoid doing so on a floor as dust attached to the retransfer film may cause printing errors.

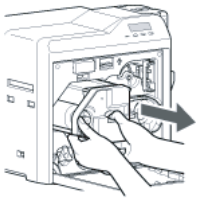


- Do not touch the inked surface (the side that faces outward when installed) with your hand. Touching it may cause printing errors. Put on the supplied gloves when handling the retransfer film.
- When handling the cassette, hold it with both hands.
  Accidentally dropping the cassette may damage it or result in injuries.
- When installing a used retransfer film, align the unused side of the film with the arrow indicated on the label of the cassette.
  Failure to do so may result in errors, or the print may turn out light.
- Do not perform work on the printer door. Do not place heavy objects or apply load on the printer. Doing so may damage it.
- During replacement, clean the four bobbin holders on the printer.
  Burrs generated by friction between the bobbins and bobbin holders may be adhered to the ink ribbon or retransfer film, causing printing errors.

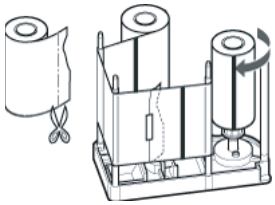
(1) Open the printer door.



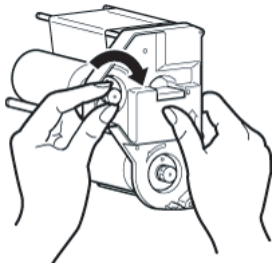
(2) Press and hold down the cassette button, and pull out the cassette (on the left) to remove the retransfer film.



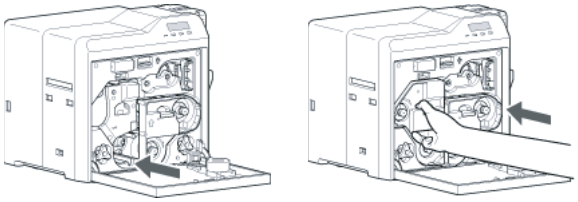
(3) Cut away the broken portion, and attach the unused portion at the supply side to the other end at the take-up side using an adhesive tape.



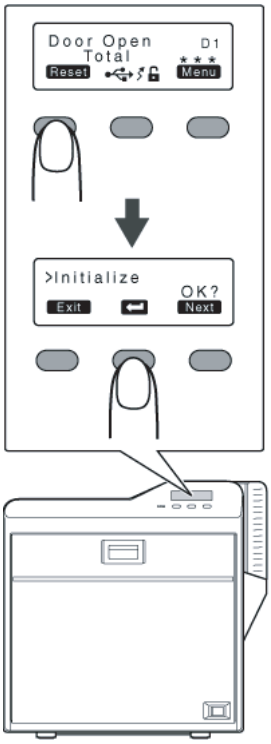
(4) Attach the retransfer film, and turn the take-up side until the cut section is out of sight.
  a) With the retransfer face facing outward, align the unused side of the film with the arrow on the cassette, and unwind it along the three shafts.
  b) Insert the retransfer film firmly into the bobbin holders with the film set to the far end of the guides.
  c) Turn the knob in the direction of the arrow to remove any slack.



(5) Insert the cassette all the way in along the guide rail until a "click" sound is heard. Close the door.



(6) Press [RESET] → ↵ to initialize the printer.



5.1.8 MG Test Err

MG writing error occurred during MG self-diagnosis.
Reset the printer.

MG Test Err	A8

5.1.9 Ink Error

An incorrect printer ink is installed. Attach a correct ink.

Ink Error	B0

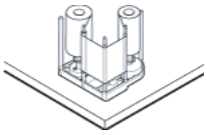
5.1.10 Ink Serch

Ink ribbon is broken. Repair it.

Ink Serch	B1

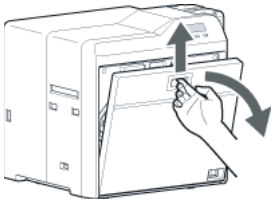
Note:

- Stand the cassette on a flat surface as illustrated in the diagram.
  Avoid doing so on a floor as dust attached to the ink ribbon may cause printing errors.

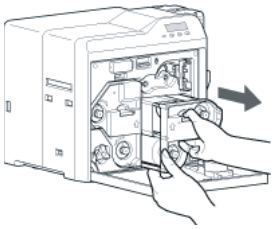


- Do not touch the inked surface (the side that faces outward when installed) with your hand. Touching it may cause printing errors. Put on the supplied gloves when handling the ink ribbon.
- When handling the cassette, hold it with both hands.
  Accidentally dropping the cassette may damage it or result in injuries.
- When installing a used ink ribbon, align the yellow side of the unused ribbon with the arrow indicated on the label of the cassette.
  If the position of the yellow side is not properly aligned, the print may turn out light.
- Do not perform work on the printer door. Do not place heavy objects or apply load on the printer. Doing so may damage it.
- During replacement, clean the four bobbin holders on the printer.
  Burrs generated by friction between the bobbins and bobbin holders may be adhered to the ink ribbon or retransfer film, causing printing errors.

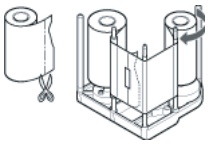
(1) Open the printer door.



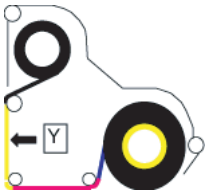
(2) Press and hold down the cassette button, and pull out the cassette (on the right) to remove the ink ribbon.



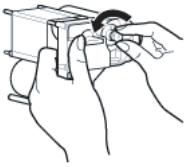
(3) Cut away the broken portion, and attach the unused portion at the supply side to the other end at the take-up side using an adhesive tape.



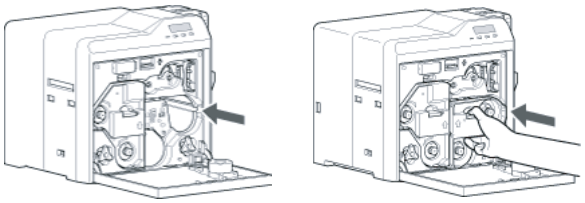
(4) Set the ink ribbon, and turn the take-up side until the cut section is out of sight.
- Install while referring to the indication on the label of the cassette.



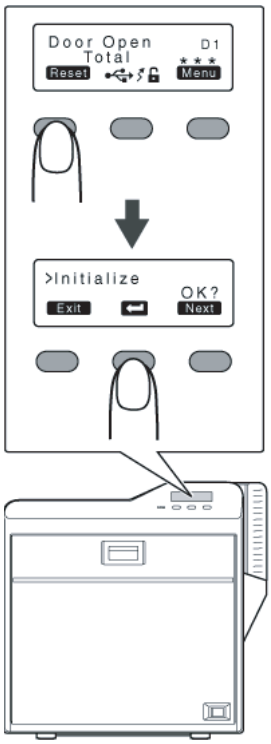
a) With the inked surface facing outward, align the yellow side of the unused ribbon with the arrow on the cassette, and unwind it along the three shafts.
b) Turn the knob in the direction of the arrow to remove any slack.
c) Insert the ink ribbon firmly into the bobbin holders with the ribbon set to the far end of the guides.



(5) Insert the cassette all the way in along the guide rail until a "click" sound is heard. Close the door.



(6) Press [RESET] → ↵ to initialize the printer.



5.1.11 Door Open

Printer door is open. Close the door. Or, the cleaning roller is not attached. Attach the cleaning roller.

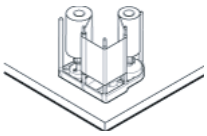
Door Open	D1

5.1.12 Film Run Out

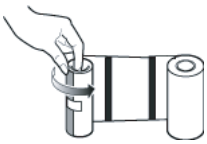
Retransfer film has run out. Replace with a new one.

Film Run Out	A2

Note:
- Stand the cassette on a flat surface as illustrated in the diagram. Avoid doing so on a floor as dust attached to the retransfer film may cause printing errors.

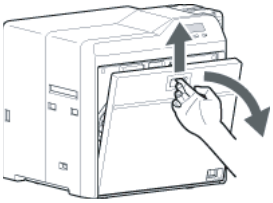


- Do not touch the retransfer face (the side that faces outward when installed) with your hand. Touching it may cause printing errors. Put on the supplied gloves when handling the retransfer film.
- When handling the cassette, hold it with both hands. Accidentally dropping the cassette may damage it or result in injuries.
- When installing a used retransfer film, align the unused side of the film with the arrow indicated on the label of the cassette. Failure to do so may result in errors, or the print may turn out light.
- When installing a new film, make sure that at least three black lines are wound onto the take-up side. Insufficient winding may cause the printer to malfunction.

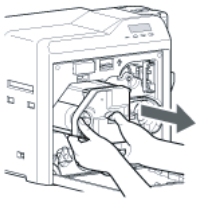


- Do not perform work on the printer door. Do not place heavy objects or apply load on the printer. Doing so may damage it.
- During replacement, clean the four bobbin holders on the printer. Burrs generated by friction between the bobbins and bobbin holders may be adhered to the ink ribbon or retransfer film, causing printing errors.

(1) Open the printer door.

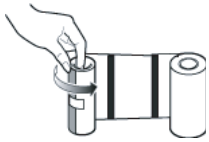


(2) Press and hold down the cassette button, and pull out the cassette (on the left) to remove the retransfer film.



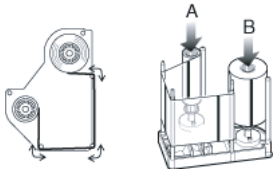
(3) Install a new retransfer film.
Install while referring to the indication on the label of the cassette.

a) When installing the retransfer film, make sure that at least three black lines are wound onto the take-up side.



b) With the retransfer face facing outward, align the unused side of the film with the arrow on the cassette, and unwind it along the three shafts.

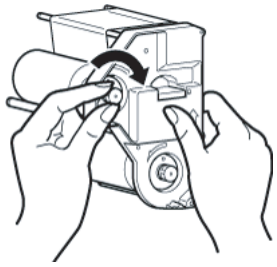
c) Insert the retransfer film firmly into the bobbin holders with the film set to the far end of the guides.
A: take-up side (black)
B: unused side (green)



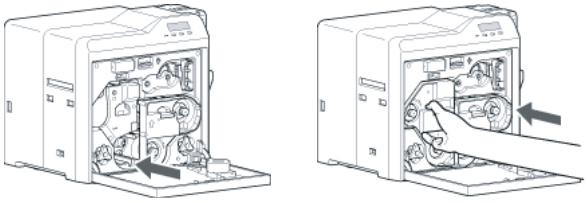
(4) Remove any slack in the film.

a) Hold the retransfer film cassette.

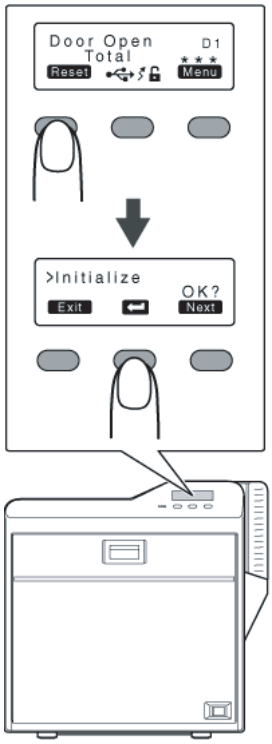
b) Turn the knob in the direction indicated by the arrow.



(5) Insert the cassette all the way in along the guide rail until a "click" sound is heard. Close the door.



(6) Press [RESET] → ↵ to initialize the printer.



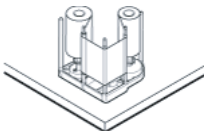
5.1.13 Ink Run Out

Ink ribbon has run out. Replace with a new one.

Ink Run Out	B2

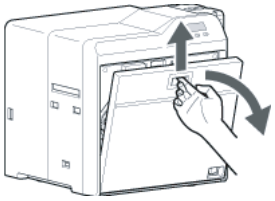
Note:

- Stand the cassette on a flat surface as illustrated in the diagram. Avoid doing so on a floor as dust attached to the retransfer film may cause printing errors.

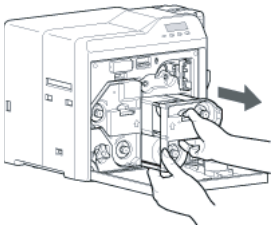


- Do not touch the inked surface (the side that faces outward when installed) with your hand. Touching it may cause printing errors. Put on the supplied gloves when handling the ink ribbon.
- When handling the cassette, hold it with both hands. Accidentally dropping the cassette may damage it or result in injuries.
- When installing a used ink ribbon, align the yellow side of the unused ribbon with the arrow indicated on the label of the cassette. If the position of the yellow side is not properly aligned, the print may turn out light.
- Do not perform work on the printer door. Do not place heavy objects or apply load on the printer. Doing so may damage it.
- During replacement, clean the four bobbin holders on the printer. Burrs generated by friction between the bobbins and bobbin holders may be adhered to the ink ribbon or retransfer film, causing printing errors.

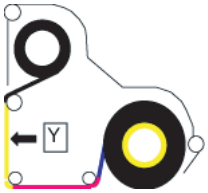
(1) Open the printer door.



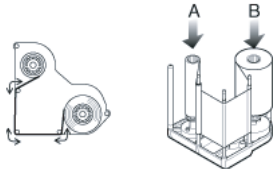
(2) Press and hold down the cassette button, and pull out the cassette (on the right) to remove the ink ribbon.



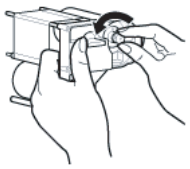
(3) Install a new ink ribbon.
Install while referring to the indication on the label of the cassette.



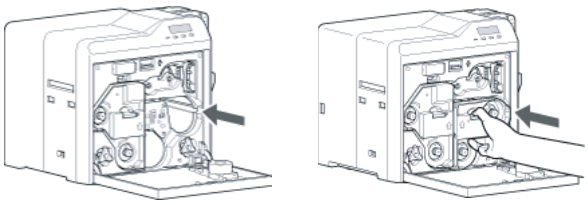
a) With the inked surface facing outward, align the yellow side of the unused ribbon with the arrow on the cassette, and unwind it along the three shafts.
b) Insert the ink ribbon firmly into the bobbin holders with the ribbon set to the far end of the guides.
A: take-up side (black)
B: unused side (yellow)



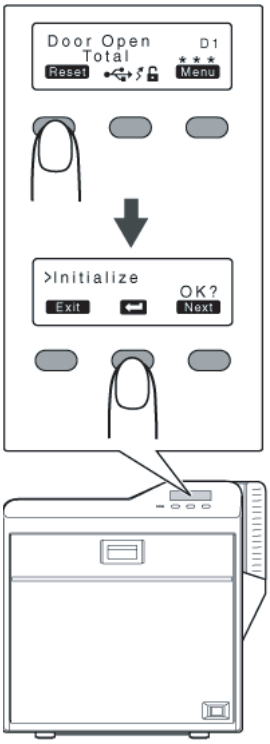
(4) Remove any slack in the ink ribbon.
a) Hold the cassette.
b) Turn the knob in the direction indicated by the arrow.



(5) Insert the cassette all the way in along the guide rail until a "click" sound is heard. Close the door.



(6) Press [RESET] → ↵ to initialize the printer.



5.1.14 Hard ware

A hardware failure has occurred on the printer. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.

Hard ware	44

5.1.15 MG Mechanical

An error has occurred in the mechanical component of the MG unit. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.

MG Mechanical	AB

5.1.16 MG Hardware

A hardware failure has occurred on the MG unit. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.

MG Hardware	AC

5.1.17 Cam Error

Heating roller operation failure. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.

Cam Error	C1

5.1.18 HR Overheat
The temperture of the warpage correction heating roller or retransfer heating roller is too high. Turn off and on the power.
If the same problem recurs, turn off the power and consult our authorized dealers.



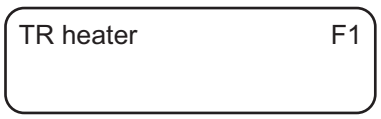
5.1.19 Hardware
A hardware error has occurred during initialization. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.



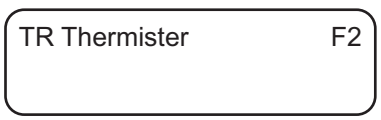
5.1.20 TR Overheat
The temperature of the retransfer roller is too high. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.



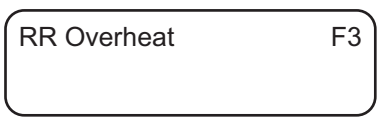
5.1.21 TR heater
Retransfer roller failure. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.



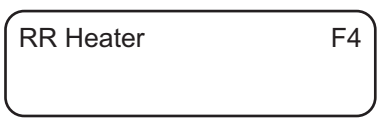
5.1.22 TR Thermister
Retransfer roller thermister failure. Turn off and on the power.
If the same problem recurs, turn off the power and consult our authorized dealers.



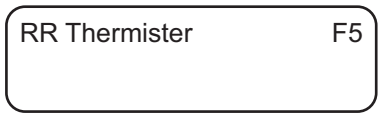
5.1.23 RR Overheat
The temperature of the warpage correction roller is too high.
Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.



5.1.24 RR Heater
Warpage correction roller failure. Turn off and on the power.
If the same problem recurs, turn off the power and consult our authorized dealers.



5.1.25 RR Thermister
Warpage correction roller thermister failure. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.



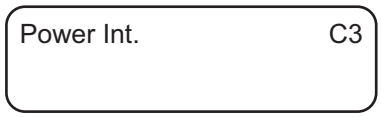
5.1.26 Overcool
The operating ambient temperature of the printer is too low.
Check the temperature. If the same problem recurs at the same operating ambient temperature, turn off the power and consult our authorized dealers.



5.1.27 Head Overheat
The temperature of the thermal head is too high. Turn off and on the power. If the same problem recurs, turn off the power and consult our authorized dealers.



5.1.28 Power Int.
A 24 V interruption is detected.
Turn off and on the power again.



5.2 Use of service mode

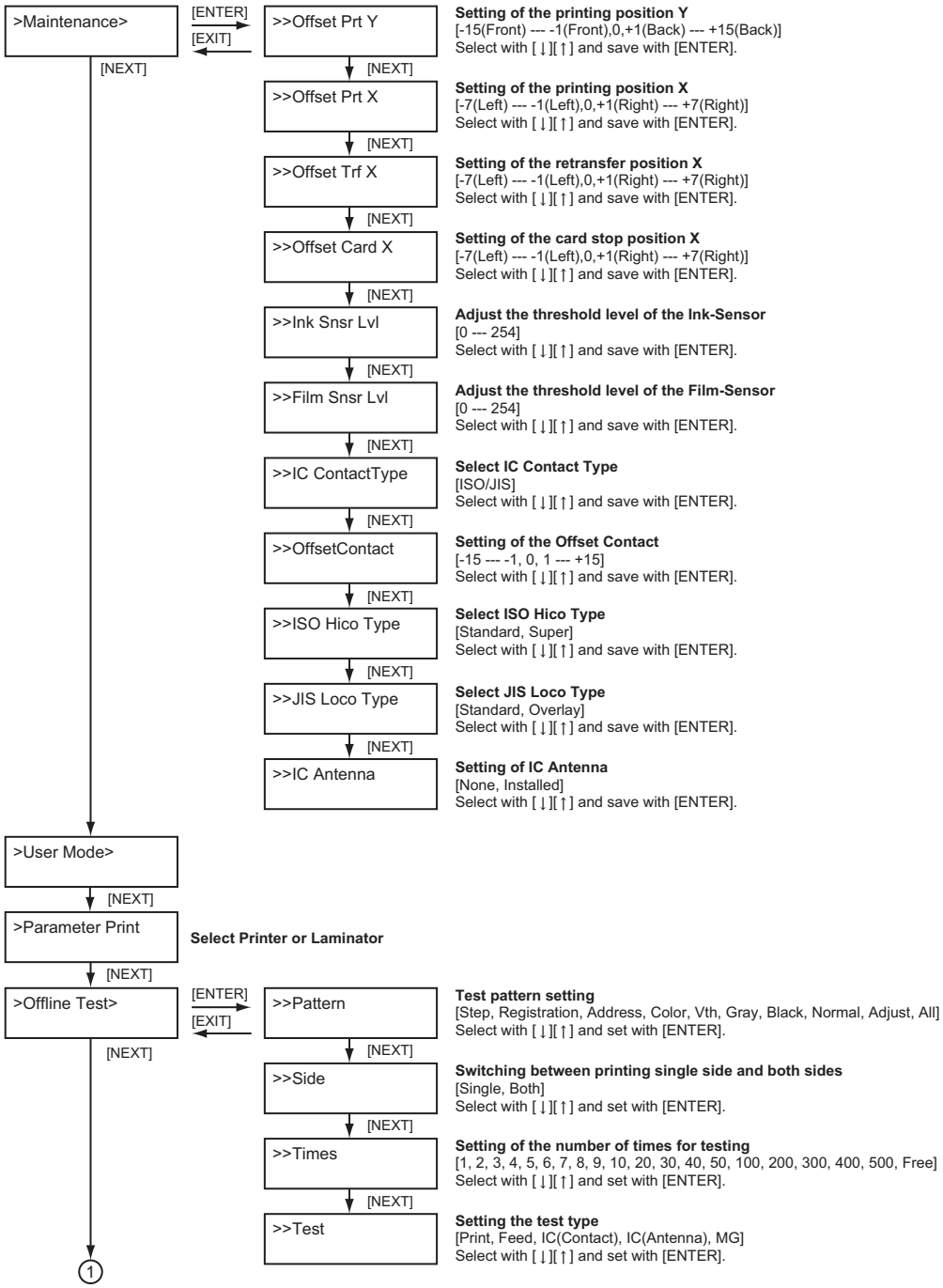
Besides "User mode" that is for setting this unit depending on the printing media or card used by the user, there is a "Service mode" for status checking and changing setting of this unit during service. The checking and adjustment of the following items can be performed in service mode:

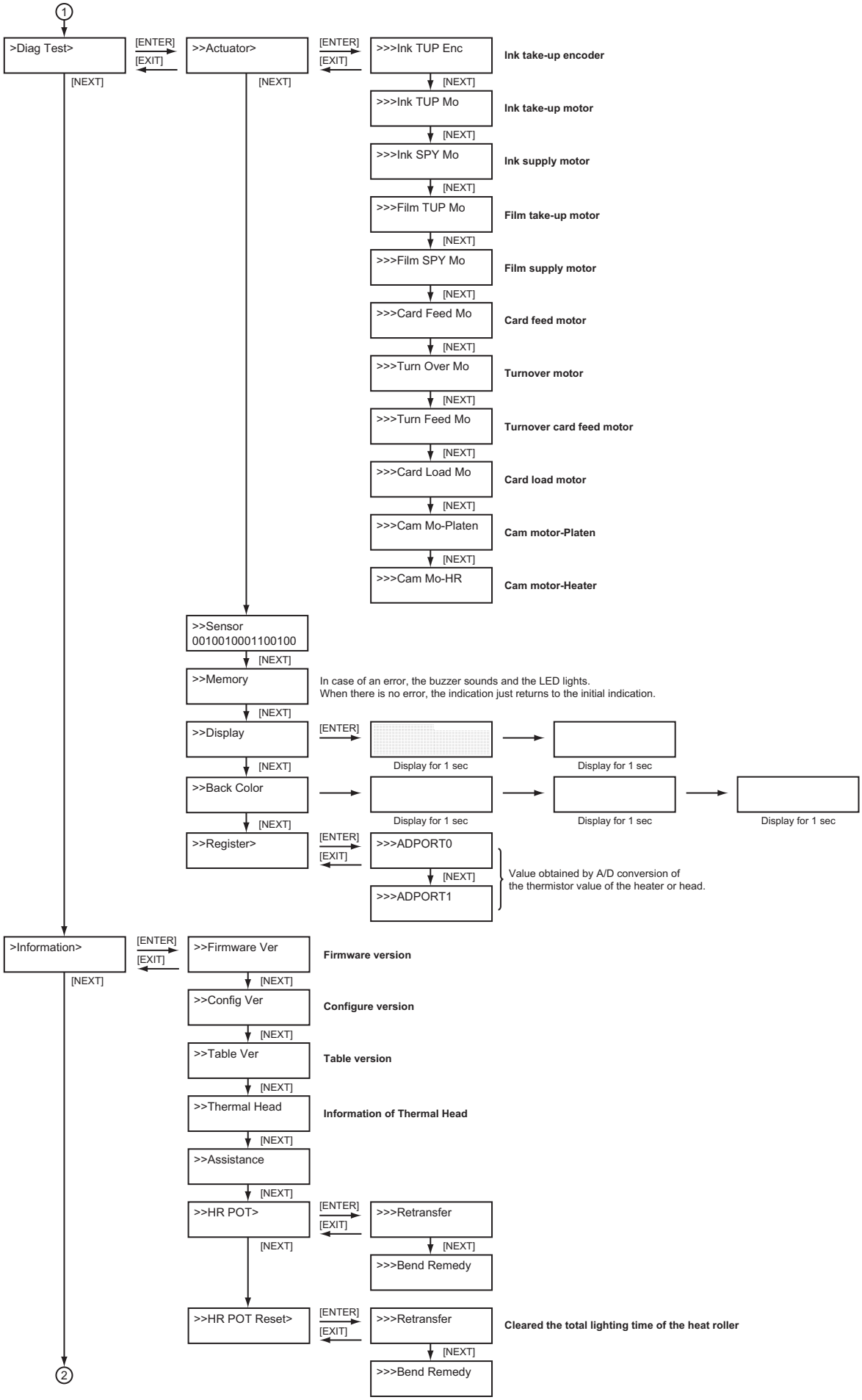
(1) Fine adjustment of the printing position
(2) Printing of built-in test pattern
(3) Operation checking of various motors and sensors
(4) Information display of printer
(5) Saving of setting data
(6) Setting change of user mode

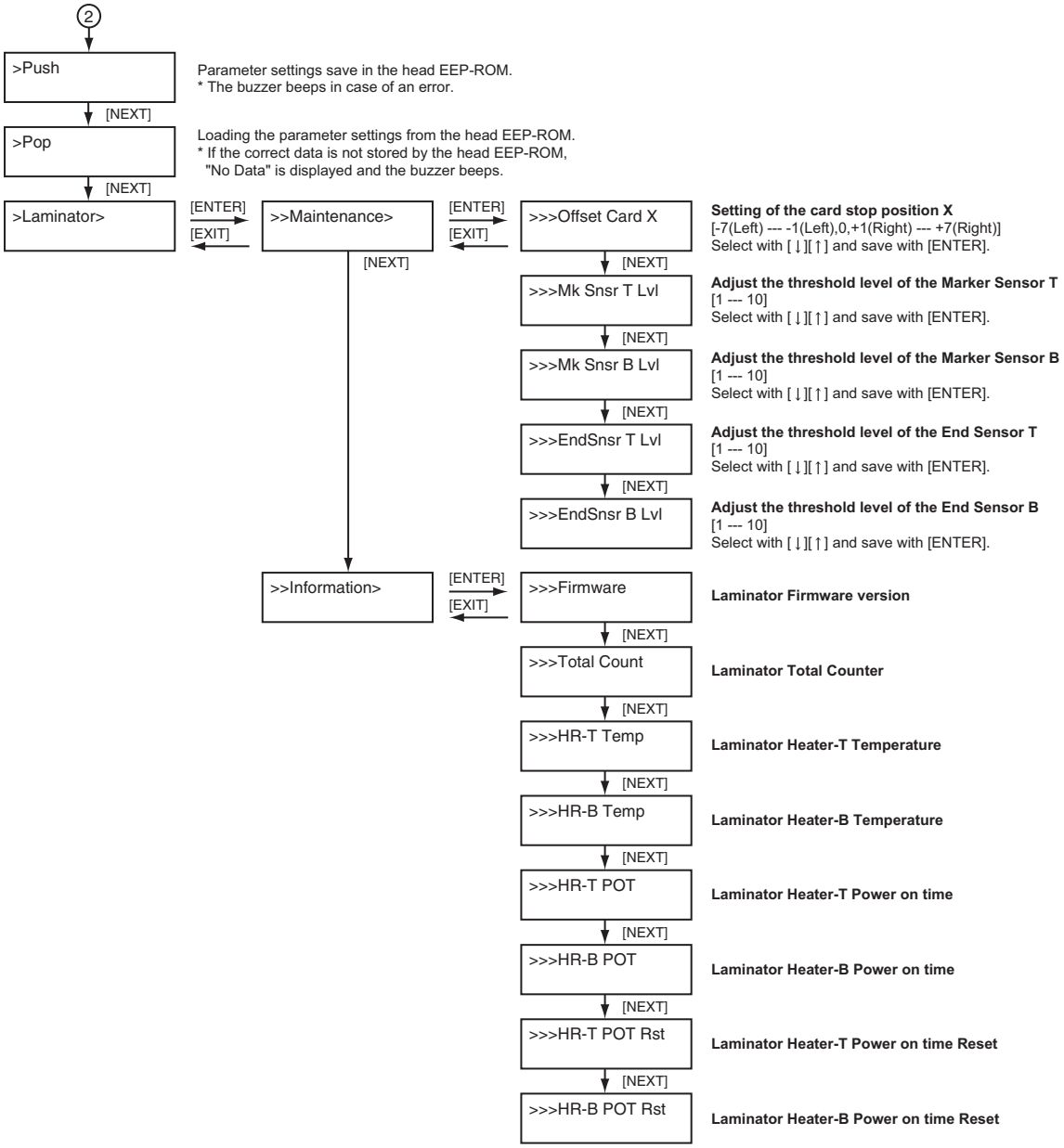
As for "User mode", refer to the instruction manual.

5.2.1 Entry into service mode

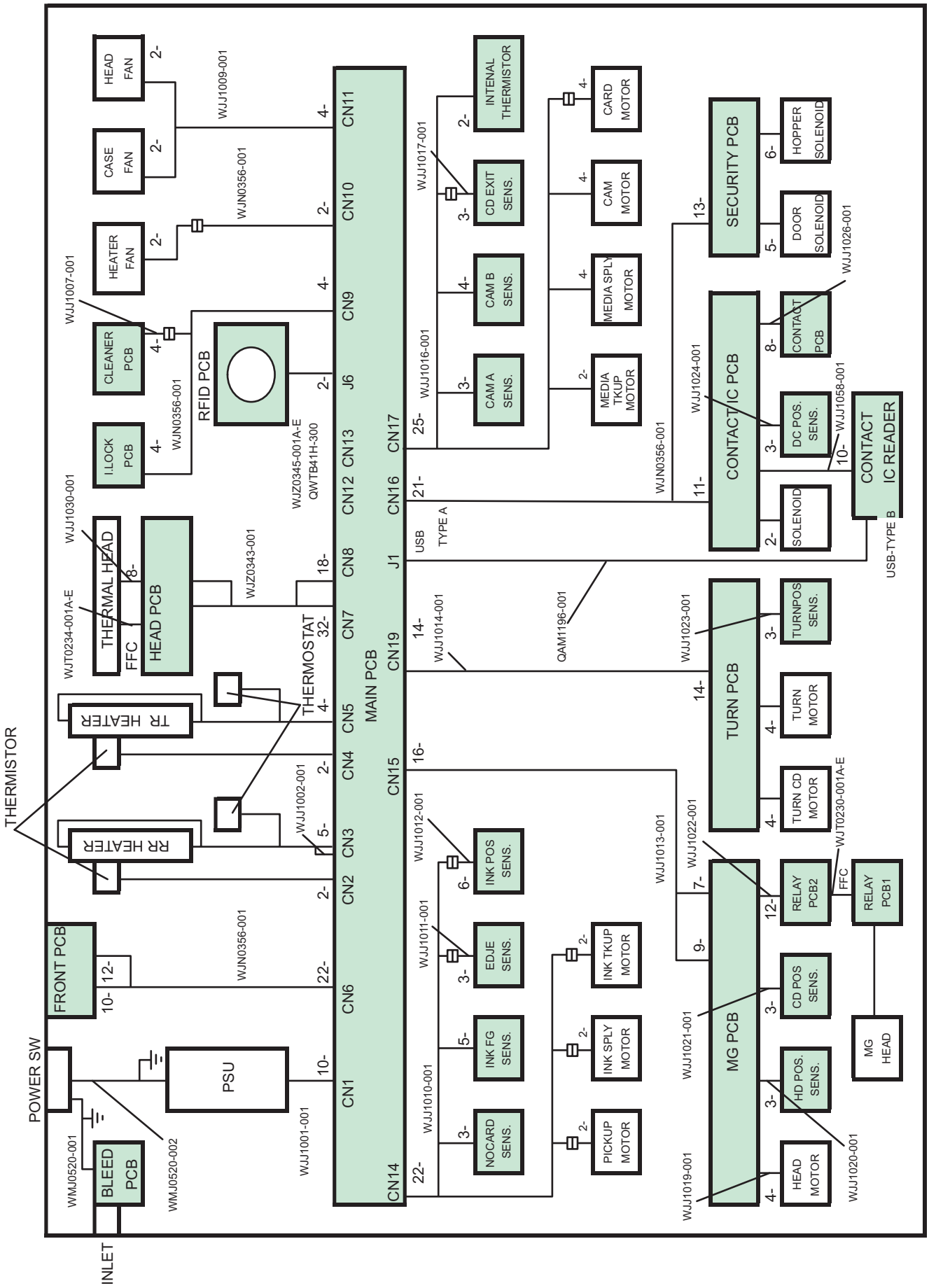
In ready condition, in preheating condition, or in error condition, press the buttons [MENU] and [Center button] simultaneously. When the button [MENU] is released first, the printer will enter into the following service mode.



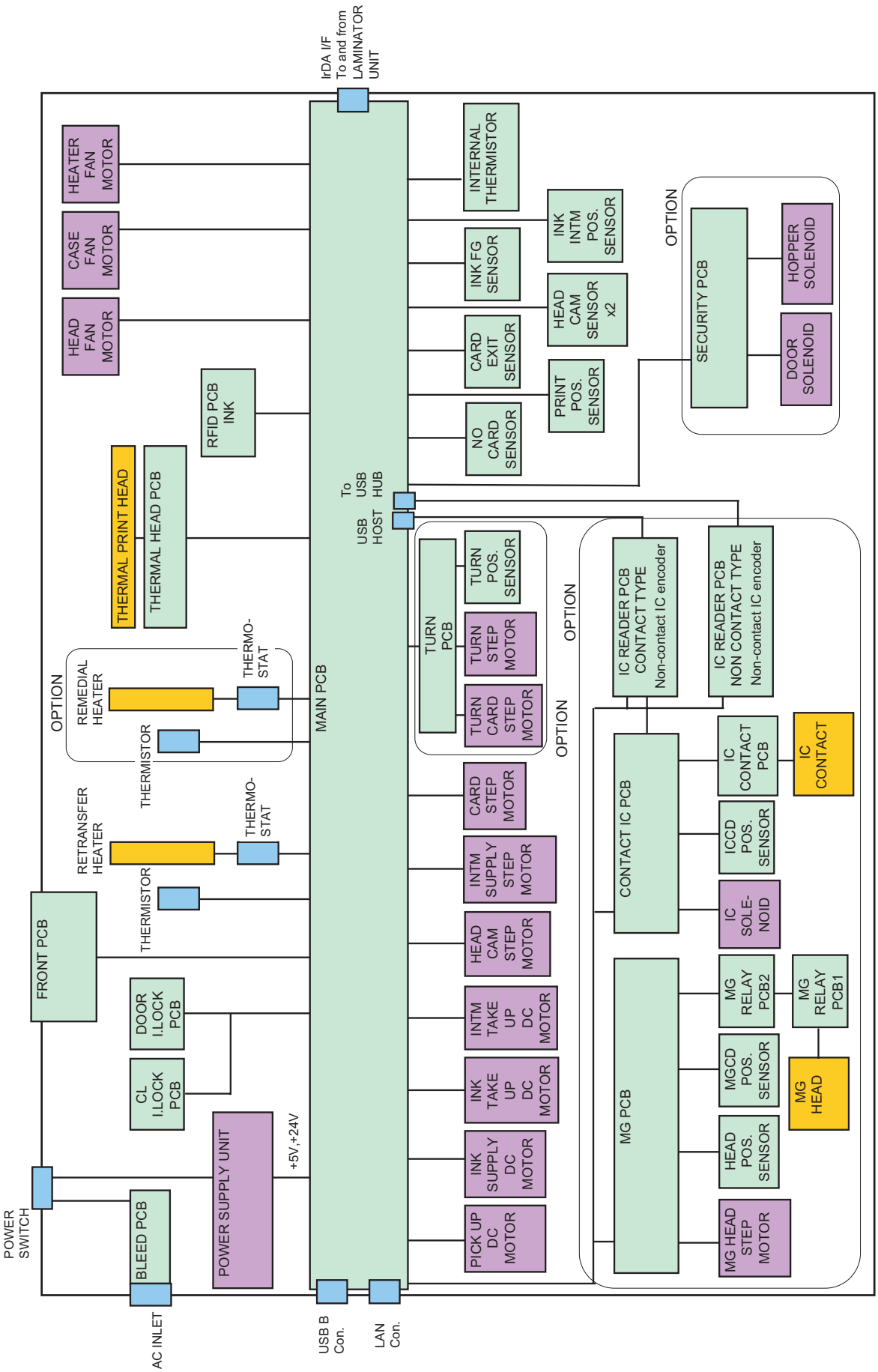

1
>Diag Test>
[ENTER]
[EXIT]
>>Actuator>
[NEXT]
>>>Ink TUP Enc
Ink take-up encoder
>>>Ink TUP Mo
Ink take-up motor
>>>Ink SPY Mo
Ink supply motor
>>>Film TUP Mo
Film take-up motor
>>>Film SPY Mo
Film supply motor
>>>Card Feed Mo
Card feed motor
>>>Turn Over Mo
Turnover motor
>>>Turn Feed Mo
Turnover card feed motor
>>>Card Load Mo
Card load motor
>>>Cam Mo-Platen
Cam motor-Platen
>>>Cam Mo-HR
Cam motor-Heater
>>Sensor
0010010001100100
>>Memory
In case of an error, the buzzer sounds and the LED lights.
When there is no error, the indication just returns to the initial indication.
>>Display
Display for 1 sec
>>Back Color
>>Register>
>>>ADPORT0
>>>ADPORT1
Value obtained by A/D conversion of
the thermistor value of the heater or head.
>Information>
>>Firmware Ver
Firmware version
>>Config Ver
Configure version
>>Table Ver
Table version
>>Thermal Head
Information of Thermal Head
>>Assistance
>>HR POT>
>>>Retransfer
>>>Bend Remedy
>>HR POT Reset>
Cleared the total lighting time of the heat roller
2


2
>Push
Parameter settings save in the head EEP-ROM.
* The buzzer beeps in case of an error.
[NEXT]
>Pop
Loading the parameter settings from the head EEP-ROM.
* If the correct data is not stored by the head EEP-ROM,
"No Data" is displayed and the buzzer beeps.
[NEXT]
>Laminator>
[ENTER]
[EXIT]
>>Maintenance>
[ENTER]
[EXIT]
>>>Offset Card X
Setting of the card stop position X
[-7(Left) --- -1(Left),0,+1(Right) --- +7(Right)]
Select with [↓][↑] and save with [ENTER].
[NEXT]
>>>Mk Snsr T Lvl
Adjust the threshold level of the Marker Sensor T
[1 --- 10]
Select with [↓][↑] and save with [ENTER].
[NEXT]
>>>Mk Snsr B Lvl
Adjust the threshold level of the Marker Sensor B
[1 --- 10]
Select with [↓][↑] and save with [ENTER].
[NEXT]
>>>EndSnsr T Lvl
Adjust the threshold level of the End Sensor T
[1 --- 10]
Select with [↓][↑] and save with [ENTER].
[NEXT]
>>>EndSnsr B Lvl
Adjust the threshold level of the End Sensor B
[1 --- 10]
Select with [↓][↑] and save with [ENTER].
[NEXT]
>>Information>
[ENTER]
[EXIT]
>>>Firmware
Laminator Firmware version
[NEXT]
>>>Total Count
Laminator Total Counter
[NEXT]
>>>HR-T Temp
Laminator Heater-T Temperature
[NEXT]
>>>HR-B Temp
Laminator Heater-B Temperature
[NEXT]
>>>HR-T POT
Laminator Heater-T Power on time
[NEXT]
>>>HR-B POT
Laminator Heater-B Power on time
[NEXT]
>>>HR-T POT Rst
Laminator Heater-T Power on time Reset
[NEXT]
>>>HR-B POT Rst
Laminator Heater-B Power on time Reset

5.3 Wiring diagram



5.4 Block diagram



5.5 Troubleshooting Sheet

Rev. 1.0

Customer Details

Company Department

In-charge TEL FAX

In-charge TEL FAX

Device Info.

Model Printer

Serial No.Note 1) Printer

Purchase date Printer

Details of Trouble (Multiple entries allowed)

- ☐ A: Does not switch to the Ready mode.
- ☐ B: printing defect
- ☐ D: card jam (feed defect)
- ☐ E: magnetic card encoding defect
- ☐ F: IC card encoding defect
- ☐ G: other defects (PC communication, printed image, etc.)

Select one or more items from A to G by ticking the corresponding checkbox.

Frequency of Occurrence (Multiple entries allowed)

- ☐ Always
- ☐ Sometimes (at regular intervals)
  - About cards out of cards
  - About cards every months
- ☐ Sometimes (multiple cards discharged at one time)
  - When such trouble frequently occurs
  - About cards out of cards

Timing of Occurrence (Multiple entries allowed)

- ☐ Immediately after purchase
- ☐ A while after purchase
  - months after purchase
- ☐ Since days ago
- ☐ After film exchang ☐ After ink replacement
- ☐ After card replenis ☐ Early morning
- ☐ After installation conditions are changed, e.g. change of layout
- ☐ Others [ ]

Note 1) Enter the eight-digit number indicated on the label at the rear of the printer.

A: Does not switch to the Ready mode.

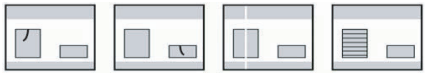
- ☐ Printer power does not turn on.
- ☐ Does not proceed beyond initialization stage.Printer display [ ]
- ☐ Error occurs during initialization.Printer error message display [ ]
- ☐ Others (Enter the symptoms in H.)

B: printing defect

- ☐ Characters or facial portraits appear double. ☐ a ☐ b
- ☐ Bleeding occurs in the characters or facial portraits.



- ☐ Streaks or wrinkles appear on the characters or facial po ☐ a ☐ b ☐ c ☐ d



- ☐ Printing position is not properly aligned. by mm Displaced toward ☐ front side ☐ rear side ☐ hopper (upper) ☐ stacker (lower).
- ☐ a: Characters appear blurred.
- ☐ b: Characters appear crushed.
- ☐ c: some parts of the characters are missing.

☐ a ☐ b ☐ c

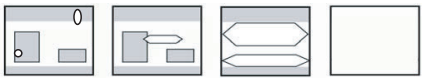


Ink serial no. [ ]

- ☐ a: Printing voids or colored spots about the size of foreig ☐ a ☐ b ☐ c ☐ d

b, c: relatively large printing voids

d: nothing is printed.



Transferred onto film?

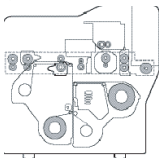
☐ Yes ☐ No ☐ large printing voids

Retransfer film serial no. [ ]

- ☐ Other printing defects

When requesting for repair, please also send photos of currently used cards or cards for which the symptoms can be identified.

D: card jam (feed defect)



Please indicate the location of occurrence on the left diagram.

E: magnetic card encoding defect

- ☐ Encoding defect occurs inside the printer.
- ☐ Magnetic data cannot be read by another reader. Reader model [ ]

Type ☐ JIS ☐ ISO ☐ Hidden ☐ Not sure

Coercivity ☐ Oe ☐ Not sure

F: IC card encoding defect

- ☐ Encoding defect occurs inside the printer.

Type ☐ contact ☐ non-contact

- ☐ IC data cannot be read by another reader.

Reader model [ ]

G: otl G: other defects (PC communication, unstable operation, etc.)

- ☐ Communication error occurs.
- ☐ PC does not recognize printer.
- ☐ PC does not recognize the encoder inside the printer.

Encoder ☐ Magnetic ☐ Contact IC ☐ Non-contact IC encoder

- ☐ Others

Please enter the symptoms in H.

If F and/or G is selected please also enter the following.

Connection between printer and PC

☐ USB connection

☐ Network connection

Software application

Manufacturer

Product name

Version

Is the driver supplied with the printer used?

☐ Yes

☐ No

☐ Not sure

H: Symptom description (please describe the symptoms in concrete details.)

☐ Similar symptoms were observed in the past

To be entered by receiving personnel | Received on: (DDMMYY): | Repair no. | Repair classification ☐ Free ☐ Paid

Contact of Personnel-in-charge

Company Department

Name TEL FAX

Mail

Secondary Dealer

Company Depart

Name TEL FAX

Mail